Global Automotive Supplier Study 2019

After years of excellent growth, the market environment is getting difficult

LAZARD

Roland Berger

August 2019

Contents

A

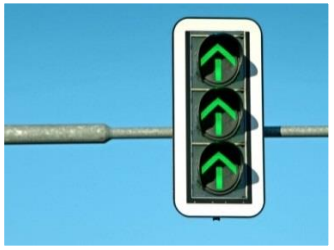
The status

Increasingly difficult environment after record profits until last year

B

The future

The transformation of the automotive industry is well underway



C

The strategies

Suppliers have different opportunities to prepare for the future

D

The contacts

Roland Berger and Lazard Automotive teams

Executive Summary (1/2)

- After record years, the automotive industry is facing a difficult time with multiple market uncertainties and a global **production volume decline by -5%** in H1/2019 vs. H1/2018
- Especially the **slowdown in the world's largest market, China, since H2/2018** is causing problems for the global suppliers
- As a result – **2019 will not be a year of recovery, but rather stay challenging for automotive suppliers.** The average industry margin is expected to fall below 7% for the first time in the last seven years driving sector valuations below 10-year average
- Amidst a weakening market environment **some structural changes have taken place**:
  - Profitability of China/NAFTA-based suppliers is shrinking. However, it is still better than that of European peers. Although Japanese suppliers improved in comparison with previous years, they remain well below other regions
  - Tire and chassis suppliers are leading in margins. Interior players remain at the bottom of the automotive suppliers field
  - Profitability of product innovators came down to 7.3% EBIT margin in the last year, reducing their relative advantage in comparison with process specialists
- **Digitization** appears to be one of the **most important** near-term topics for suppliers as it touches multiple dimensions: the potential to create **new business models,** offer **new products and services,** and improve the **efficiency of operational and administrative processes**
- In the long term **the mobility landscape of today will change** – especially as **new market entrants** possess a non-automotive mindset and **capture parts of the future automotive business**

Source: Roland Berger/Lazard

Executive Summary (2/2)

- **For traditional automotive suppliers the risks in the market are high: on the one hand, they could potentially miss out on new revenue opportunities, and on the other hand, they face increasing price pressure from the OEM side,** who have to deal with increasing capital requirements and declining profit pools themselves
- **For traditional suppliers, access to capital may become tougher.** Equity **investors favor other industries** whereas financing **banks** are becoming **more cautious** about cyclicality and long-term threats, especially for many small traditional suppliers. In addition, **M&A activities in the sector have gone down recently**, with Chinese investors, representing an important buyer group, becoming less active
- While many small traditional players will face difficult times, new global entrants and technology system integrators are generally well-positioned for tomorrow's changes. **Performance-improvement programs, accelerated capacity adjustments and pro-active portfolio management are recommended countermeasures for most suppliers**

Source: Roland Berger/Lazard

Contents

A

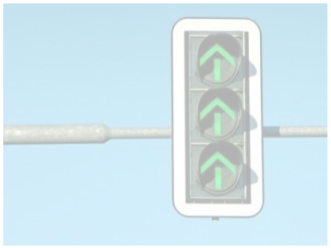
The status

Increasingly difficult environment after record profits until last year

B

The future

The transformation of the automotive industry is well underway



C

The strategies

Suppliers have different opportunities to prepare for the future

D

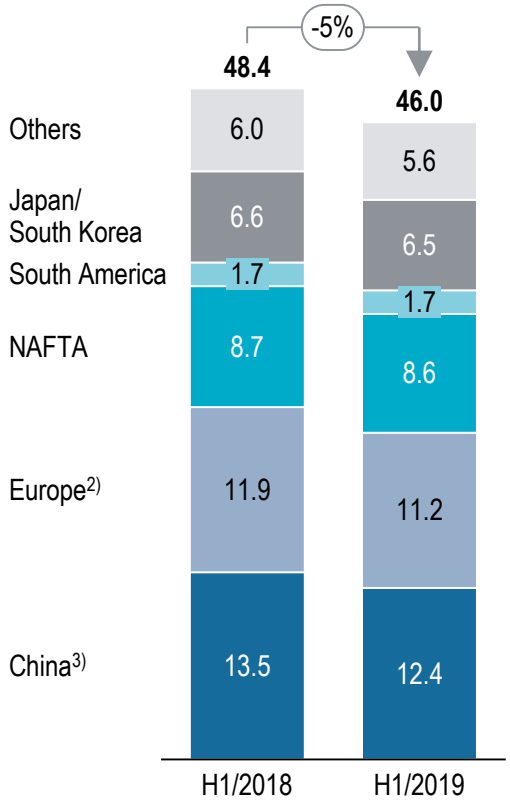
The contacts

Roland Berger and Lazard Automotive teams

Within the first half of 2019 the global automotive markets significantly weakened relative to 2018

Recent developments in the automotive industry

H1/18 vs. H1/19 [m units][1)]



Automotive headlines

"Again a Schaeffler profit warning"
Handelsblatt Online – 07/19

"Insolvency of Eisenmann Group – Next large automotive supplier failed"
Wirtschaftswoche Online – 07/19

"Bosch sees car production falling 5% in 2019"
ReutersNews – 07/19

"Goodyear Tire & Rubber's Profit, Revenue Miss Estimates"
Dow Jones Institutional News – 07/19

"U.S. auto sales seen slipping in July"
ReutersNews – 07/19

"Lear 2Q Profit Falls Amid Global Vehicle Production Decline"
Dow Jones Institutional News – 07/19

"Weak automotive economy starting to badger Hella"
Reuters – 07/19

"Michelin margins hit by auto slump despite price hikes"
ReutersNews – 07/19

"Slackness in sales – Automotive economy in the downturn"
Handelsblatt Online – 07/19

"Renault Profit Drops, Hit by Lower Sales, Nissan Payout"
Dow Jones Institutional News – 07/19

"Nissan to Cut 12,500 Jobs as Its Profit Plunges"
Dow Jones Newswires Chinese – 07/19

"Ford's Shrinking China Business Is Hurting Its Global Ambitions"
Dow Jones Institutional News – 07/19

"There is a storm brewing"
AUTOMOBIL PRODUKTION – 07/19

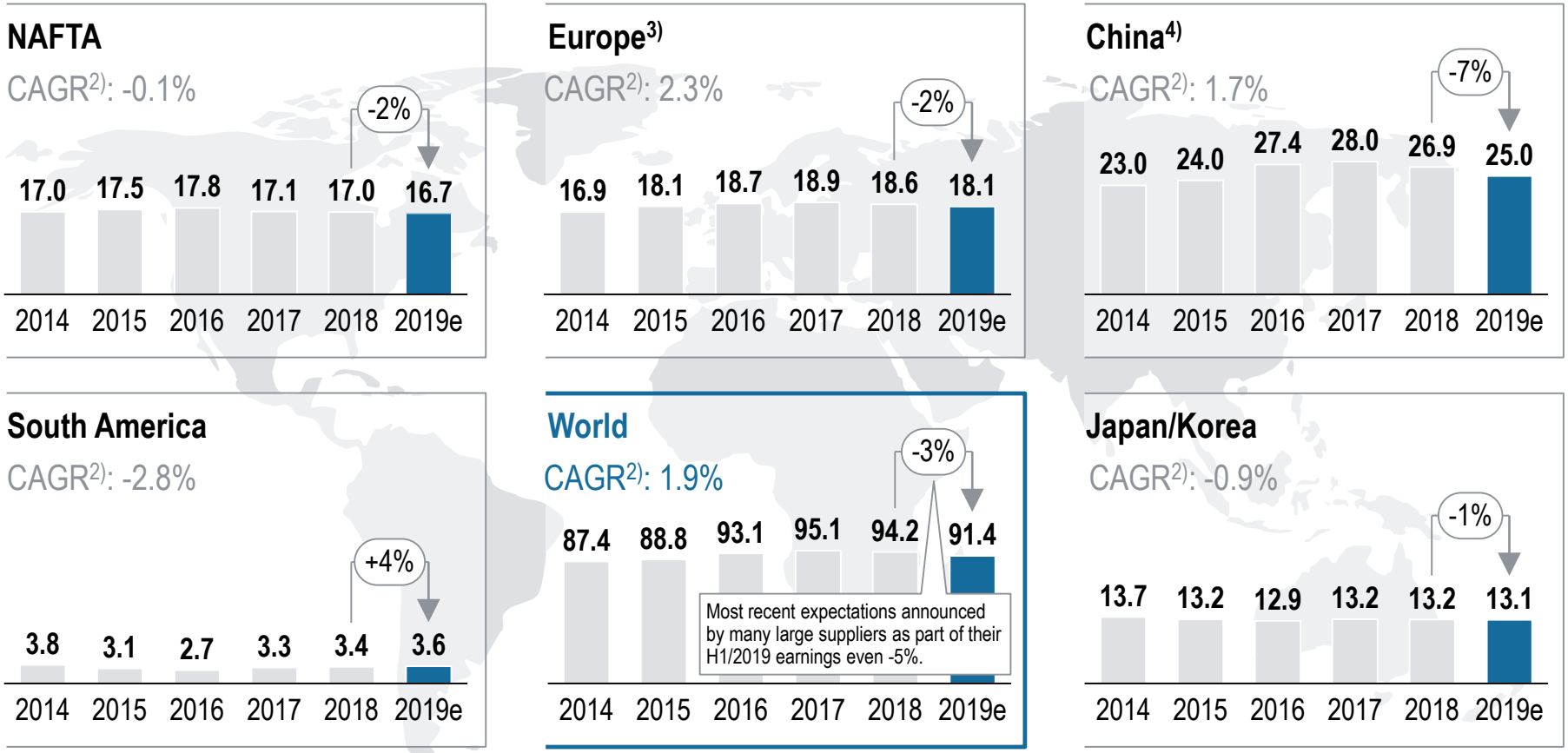
"Due to weakening automotive markets press supplier Schuler cuts 500 jobs"
Handelsblatt – 07/19

1) Global light vehicle production volume 2) Excluding CIS and Turkey 3) Greater China

Source: IHS May/June 2019, Automotive, Roland Berger/Lazard

2018 production was lower than 2017, driven by weakness in Triad market in H2/2018 – Further decline expected in 2019

Global light vehicle production volume[1] by region, 2014-2019e [m units]



1) Incl. light commercial vehicles; 2) CAGR 2014-2018; 3) Excluding CIS and Turkey; 4) Greater China

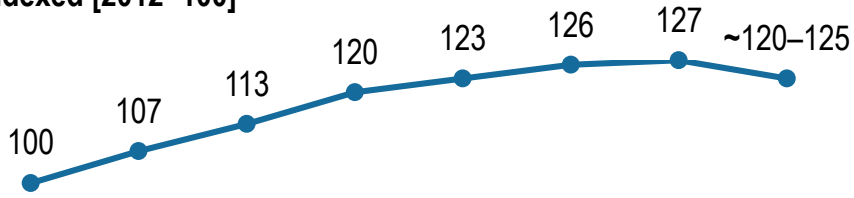
Source: IHS May/June 2019, Roland Berger/Lazard

Growth and profit of previous years come to an end – Average 2019 EBIT margin likely <7% for the first time in the last seven years

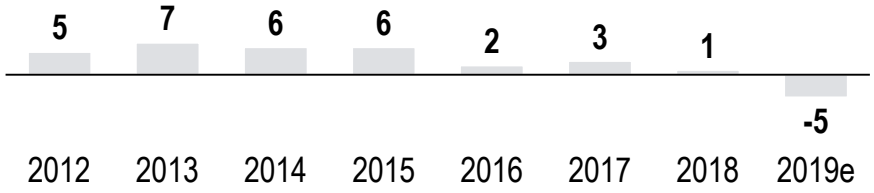
Key supplier performance indicators, 2012-2019e (n=~600 suppliers)

Revenue growth

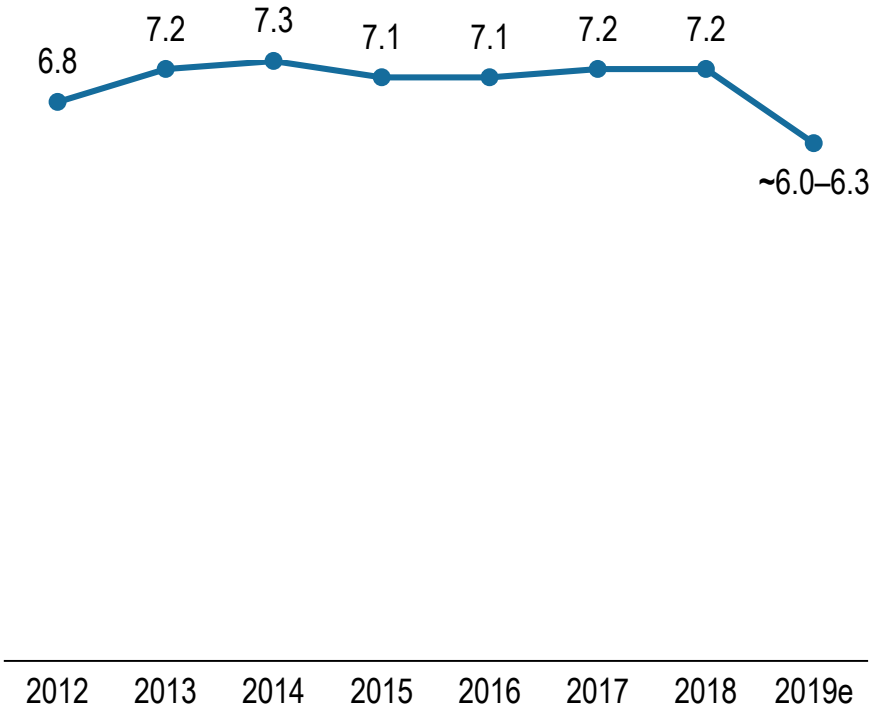
Indexed [2012=100]



YoY [%]



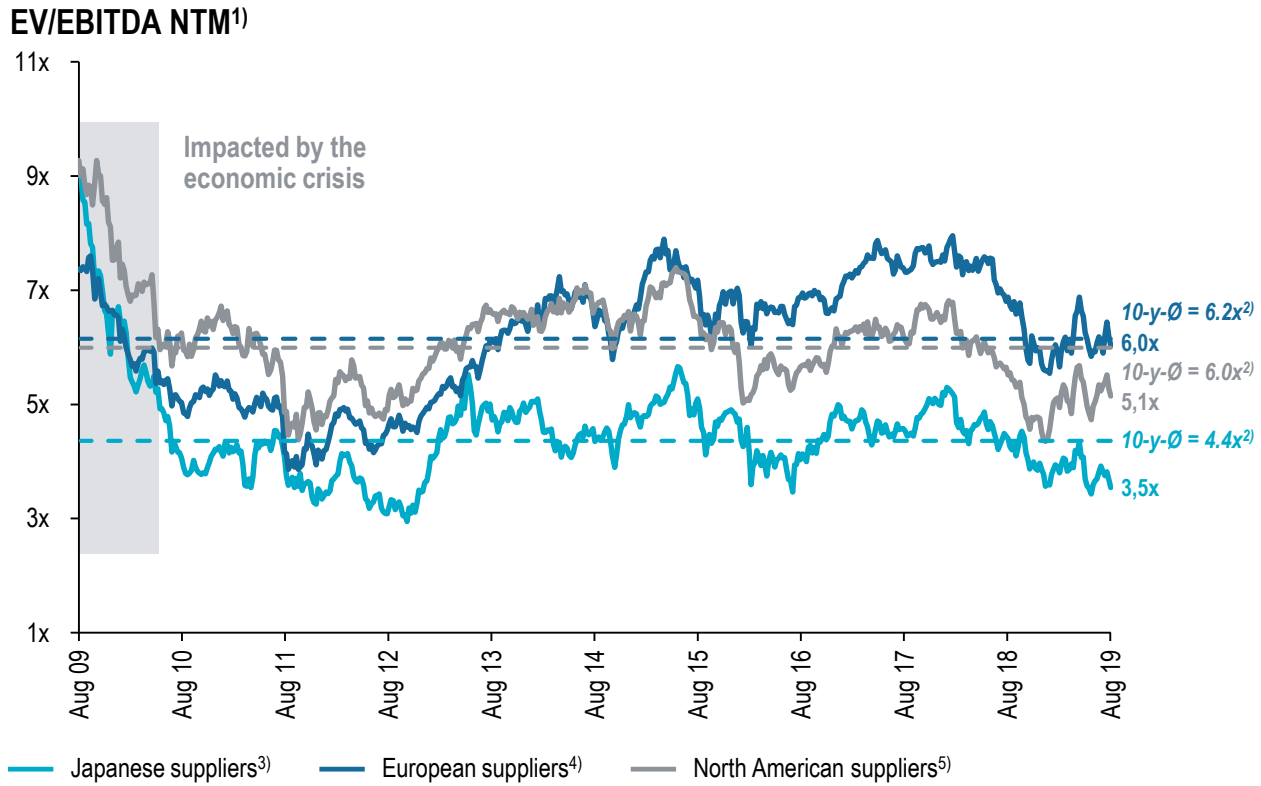
EBIT margin [%]



Source: Company information, analyst forecasts, Lazard/Roland Berger supplier database

The overall sentiment is also reflected in supplier valuation levels that trade below their long-term average

Evolution of automotive supplier valuations



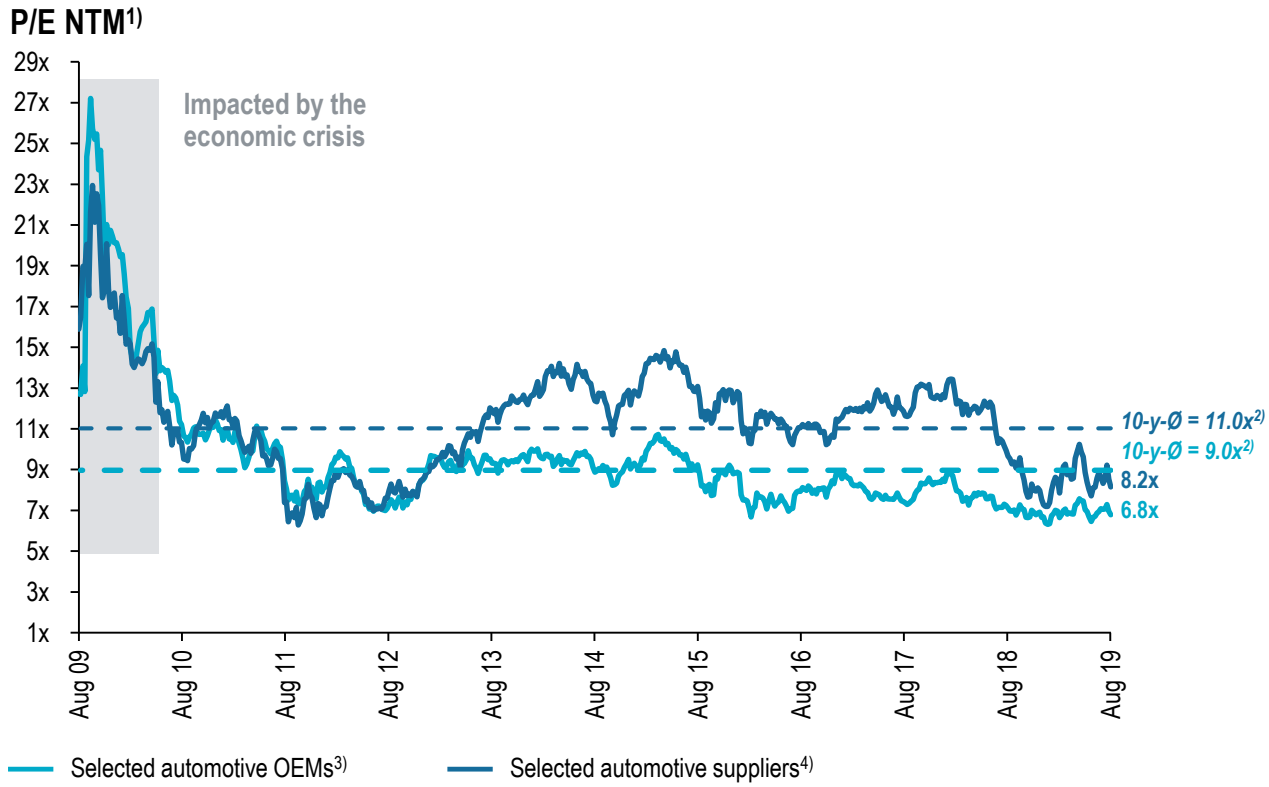
- Valuation multiples of publicly traded automotive suppliers are **below their long-term average** values, driven by the weakening market environment and the existing uncertainties in the changing automotive industry, paired with investors' cyclical concerns
- Recent multiple uplift in early summer 2019 also driven by reduced earnings forecasts
- Many **suppliers are currently facing deteriorating free cashflows**, given comparably high working capital and capex requirements in addition to the shrinking operating profits
- **Japanese** companies continue to trade **at a discount to European and North American** suppliers, reflecting the stagnation in their home market

1) NTM = Next twelve months; 2) Excluding the distorting impact of the economic crisis (Aug–Dec 2009 multiples); 3) Aisin Seiki, Bridgestone, Denso, Exedy, JTEKT, Keihin, Koito, NHK Spring, NSK, Stanley Electric, Showa, Sumitomo Riko, Tokai Rika, Toyoda Gosei, Toyota Boshoku and TS Tech; 4) Autoliv, Autoneum, Brembo, CIE, Continental, ElringKlinger, Faurecia, Georg Fischer, Haldex, Hella, Leoni, Norma, Plastic Omnium, PWO, SHW, SKF, Stabilus and Valeo; 5) American Axle, BorgWarner, Cummins, Dana, Delphi, Iochpe-Maxion, Lear, Magna, Martinrea, Meritor, Tenneco, Tower and Visteon

Source: Factset, Roland Berger/Lazard

The gap between the valuation of automotive OEMs and suppliers has narrowed since the beginning of 2018, driven by suppliers' multiple de-rating

Evolution of automotive OEM and supplier valuations



- Supplier valuation multiples have historically outperformed OEMs, with OEMs' valuations appearing to have **reflected risks from disruptive trends** to a larger extent
- However, the **valuation spread has narrowed** in 2018 and 2019
- Investors seem to increasingly **factor in the headwinds and cost of disruption** in their supplier valuations, being at the same time more **cautious about the cost and payback of growth areas** for the supplier sector

1) NTM = Next twelve months; 2) Excluding the distorting impact of the economic crisis (Aug–Dec 2009 multiples); 3) BMW, Daimler, Ford, General Motors, Honda, Toyota and Volkswagen; 4) American Axle, Autoliv, BorgWarner, Brembo, Continental, Dana, Delphi, Faurecia, Hella, Magna, Norma and Valeo

Source: Factset, Lazard/Roland Berger

Financial performance of suppliers varies greatly depending on region, company size, product focus and business model

Profitability trends in the global automotive supplier industry 2018

Region 1

+

- **Chinese**-based suppliers achieved the highest EBIT margins with ~9.0% in 2018
- **NAFTA**-based suppliers profit from their previous restructuring efforts reaching ~8.4% EBIT margins
- **However**, in both regions **deterioration expected for 2019**

–

- **Japanese** suppliers have improved but remain at a low level of ~5.8% EBIT margins
- Globally, suppliers **expected** to face **margin declines** in 2019

Company size 2

+

- **Mid-size suppliers** (EUR 1.0 to 2.5 bn revenues) could realize the highest EBIT margins with ~8.7%
- **Large suppliers** with >EUR 10 bn revenues achieved above average EBIT margins of ~7.3%

–

- **Very large suppliers** (EUR 5.0 bn to 10.0 bn revenues) fall behind with an EBIT margin of 6.5%
- **Small suppliers** (EUR 0.5 bn to 1.0 bn revenues) fail in terms of translating above-average growth into profitability improvements

Product focus 3

+

- **Tire suppliers** benefit from their aftermarket business and continue to realize high EBIT margins of ~11.3%
- **Chassis suppliers** also outperform the market and reach EBIT margins of ~8.1% driven by recent technology trends

–

- **Powertrain** suppliers lost ground and achieved below-average margins
- **Interior** suppliers still trail their peers, with recently increasing margins but still waiting for future customization trends to realize

Business model 4

+

- **Process specialists** are able to catch up to product innovators in terms of EBIT margins
- The systematic "lean" focus of the last years pays off with 6.6% EBIT margins

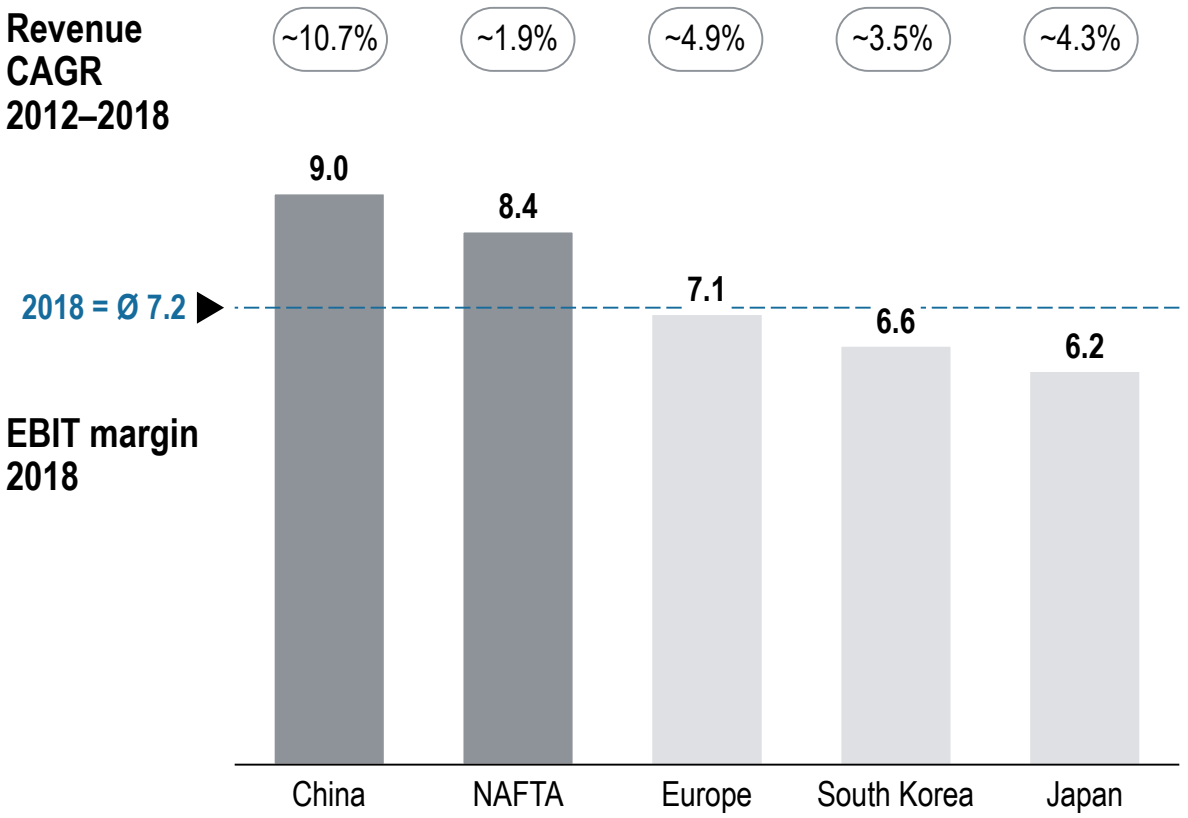
–

- **Product innovators** are growing strongly but have difficulties translating this further into above-average EBIT margins

Source: Company information, Roland Berger/Lazard, Roland Berger/Lazard supplier database

Automotive suppliers globally have to deal with declining margins – NAFTA- and China-based suppliers still above average

Key supplier performance indicators by region 2018 [%]

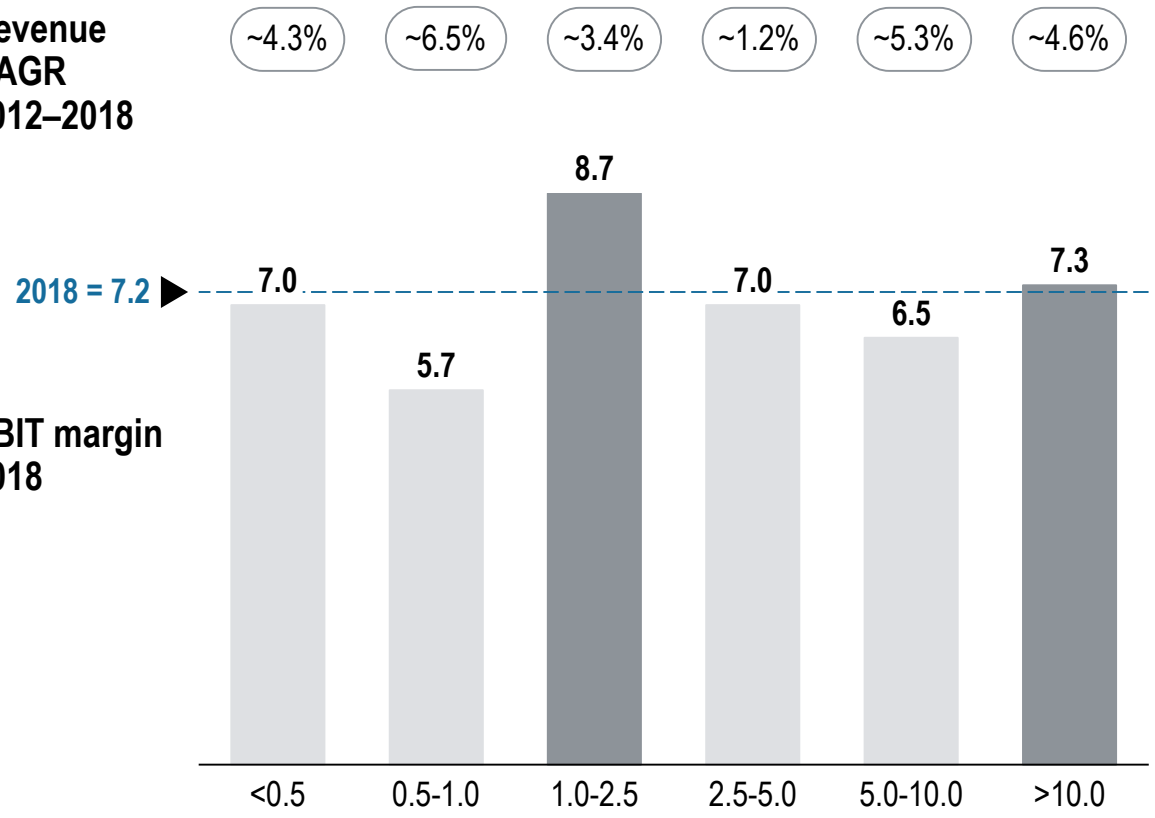


- **China-based suppliers defended their far-above-average margins**; however, they are expected to suffer from the slowdown in the domestic market since H2/18
- **NAFTA-based suppliers** can **defend their excellent position** from previous years and are still outperforming European players, but will also see further declines due to the negative market development in H2/18 and 2019
- **Europe based suppliers fall behind** in terms of margin development; 2018 and beginning of 2019 were difficult due to volume declines and output issues in conjunction with the new WLTP process
- As in previous years, **South Korea–based suppliers' margins are below average**
- **Japan-based suppliers proceeded with their recovery** in terms of profitability but are still far behind the other regions

Source: Company information, Roland Berger/Lazard, Roland Berger/Lazard supplier database

Financially strong multinational suppliers as well as mostly technology-focused mid-size suppliers achieve the highest margins

Key supplier performance indicators by company size (EUR bn sales) 2018 [%]

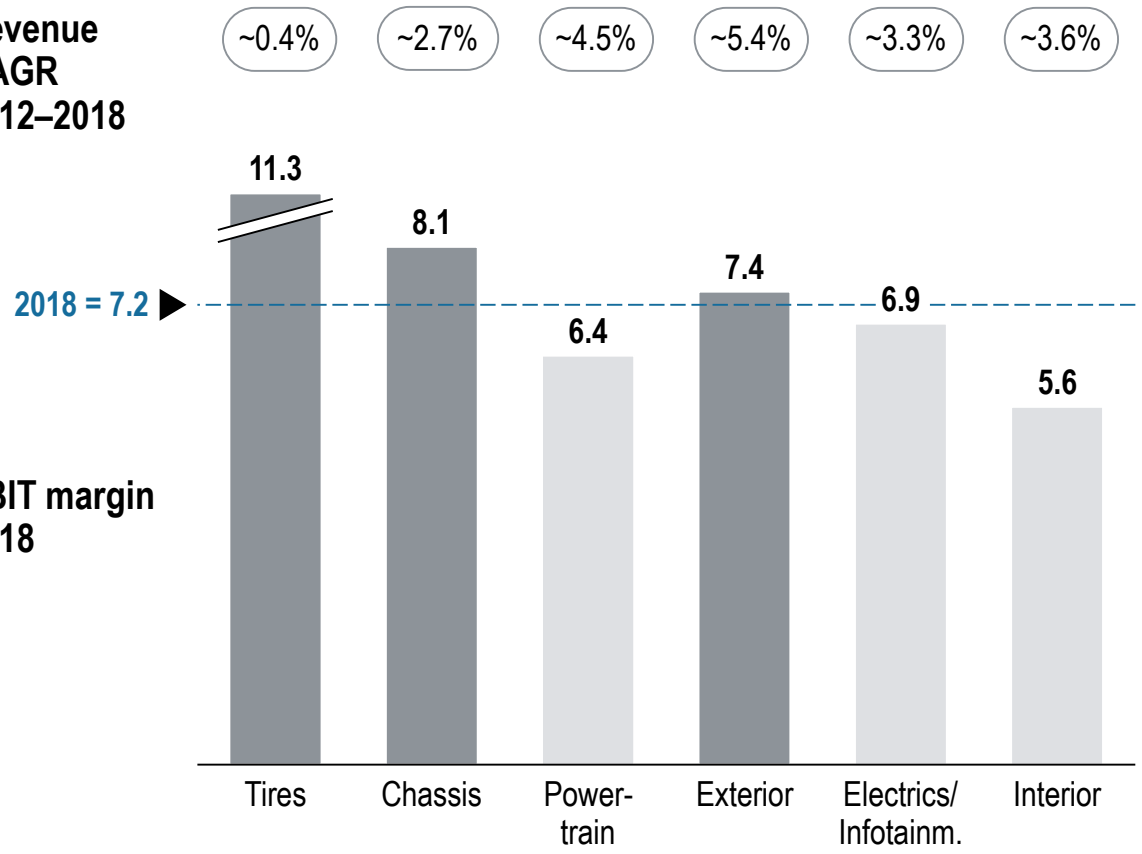


- **Large multinational suppliers** (above EUR 10 bn revenues) can leverage scale effects and benefit from additional business potentials due to new technologies or digital business models
- **Very large suppliers** (EUR 5 bn to 10 bn revenues) are in a sandwich position between OEM price pressure and high capital requirements for new technologies and further growth
- **Large** suppliers (EUR 2.5 bn to 5 bn revenues) achieve industry-average values for revenue growth and margins
- **Mid-size suppliers** (EUR 1.0 bn to 2.5 bn revenues) achieve above-average profitability, mostly on the back of a very focused and technology-enabled product portfolio
- **Small suppliers** (EUR 0.5 bn to 1.0 bn) seem to have difficulties translating growth into margin improvement

Source: Company information, Roland Berger/Lazard, Roland Berger/Lazard supplier database

Tire suppliers benefit from favorable raw material costs & business model – Chassis suppliers well positioned for future technologies

Key supplier performance indicators by product focus 2018 [%]

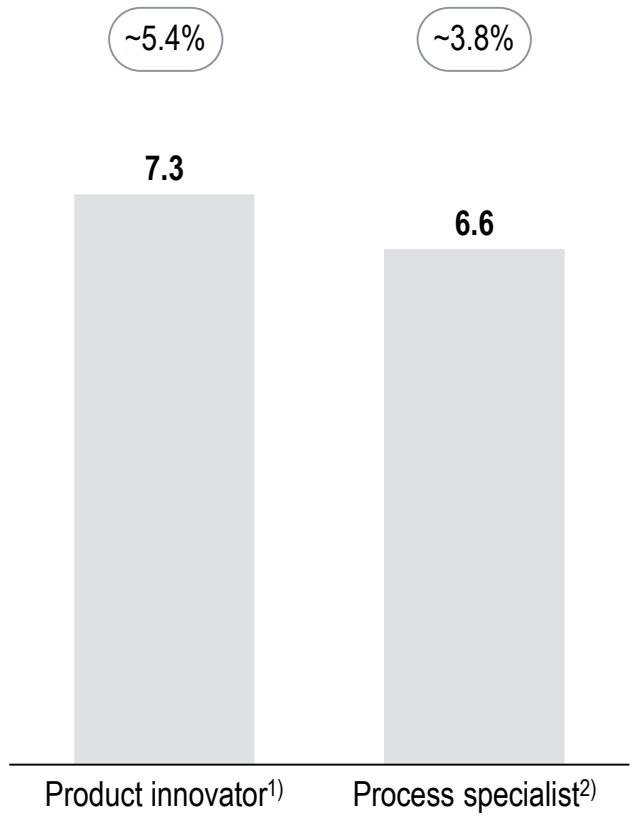


- **Tire suppliers** can **benefit from** their **aftermarket business**; favorable raw materials price developments in the past helped to achieve far-above-average margins
- **Chassis suppliers** achieve above-average margins due to **advanced driver assistance** and **active safety**
- **Powertrain** margins further pressurized by **intensified competition**, **the cost of (multiple) innovations** and the **rise of electric vehicles**
- **Exterior** suppliers have been growing strongly. **Margins benefited from raw materials price developments** and increasing importance of light weight with high-quality material
- **Electrics/infotainment** suppliers still below average although importance of components is increasing – intensified competition
- **Interior suppliers** don't see a recovery

Source: Company information, Roland Berger/Lazard, Roland Berger/Lazard supplier database

Product innovators have not kept the high margin levels of the previous years and have to focus on process efficiency in the future

Key supplier performance indicators by business model 2018 [%]

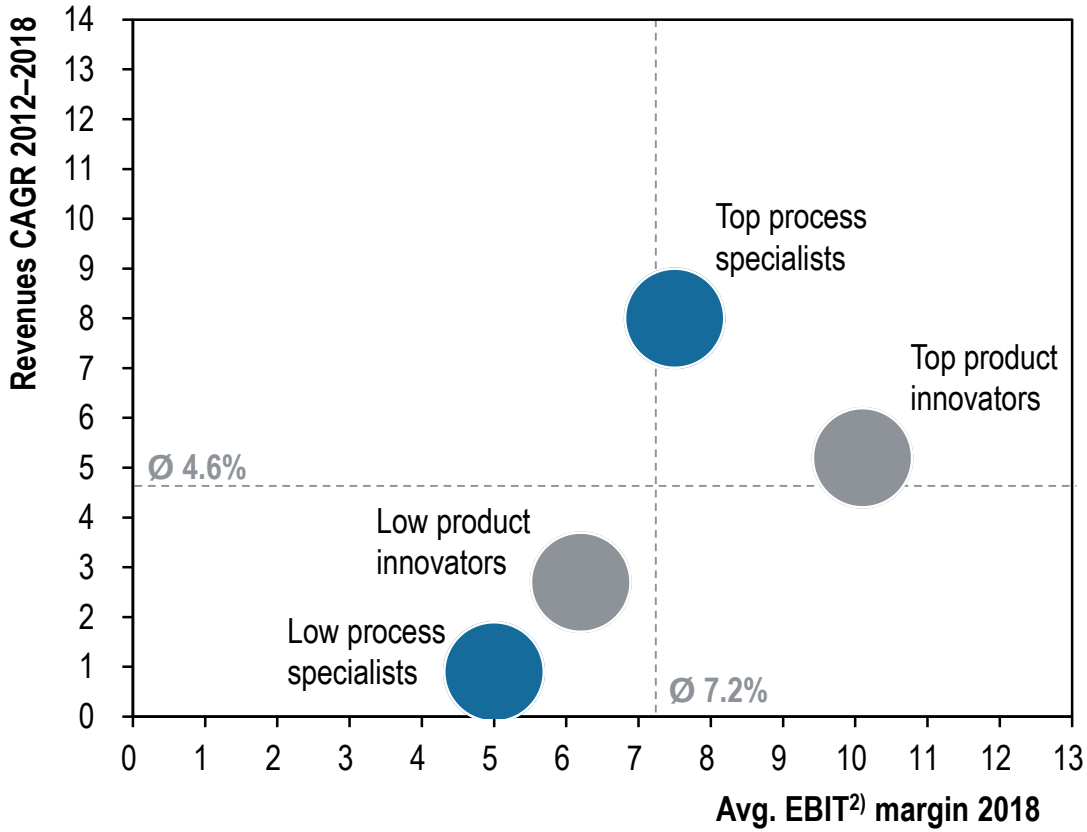


- On average, innovative products feature **higher differentiation potential** and greater OEM willingness to pay higher prices
- But overall **profit margins of product innovators came under pressure** due to increasing OEM price pressure and intensified competition
- **Efficiency improvements**, e.g. subsequent to Industry 4.0 opportunities and lean approaches seem to **pay off for process specialists**
- **Gap between process specialists and product innovators reduced** over the last years; reason to be seen in the MADE3) trends and the resulting financial/operational challenges, especially for product innovators

Note: Analysis excludes tire suppliers.
1) Business model based on innovative products with differentiation potential; 2) Business model based on process expertise (while product differentiation potential is limited)
3) M = Mobility A = Autonomous D = Digitization E = Electrification
Source: Company information, Roland Berger/Lazard, Roland Berger/Lazard supplier database

However, the top performers in terms of average margins are still among the product innovators

Key performance indicators of top vs. low-performing suppliers[1)]



- **Product innovators** outperform process specialists in terms of **average profitability**
- **Top process specialists**, though, achieve average revenue **growth that is above the top product innovators**
- **Top process specialist growth** is also **accelerated by M&A** activities of several players
- Large **difference in growth rates** between top and low-performing process specialists indicates the **relevance of scale economies**

1) Top (low) performance based on above-average (below-average) revenue growth 2012–2018, ROCE 2012–2018 and ROCE 2018; 2) EBIT after restructuring items

Source: Company information, Roland Berger/Lazard, Roland Berger/Lazard supplier database

Contents

A

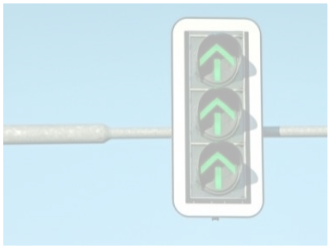
The status

Increasingly difficult environment after record profits until last year

B

The future

The transformation of the automotive industry is well underway.



C

The strategies

Suppliers have different opportunities to prepare for the future

D

The contacts

Roland Berger and Lazard Automotive teams

The importance of mobility- and digitization-related business models significantly increased while electrified mobility is becoming normality

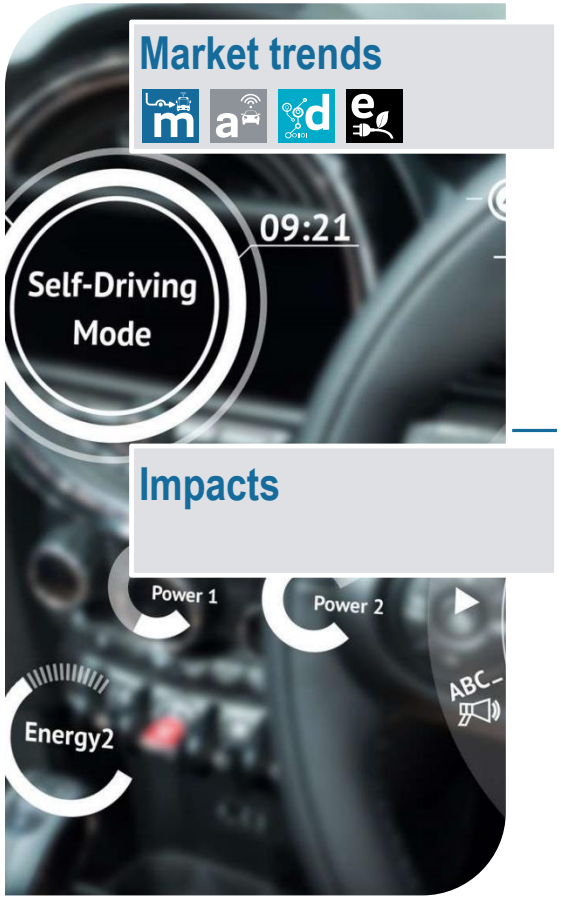
MADE temperature check 2017 vs. today

		2017		2019	
Mobility **The future of moving people & goods**		Ride-hailing firms scaling up. OEMs trying to figure out their role.	★☆☆	Ride-hailing players become technology drivers. Key role as future clients.	★☆☆
Autonomous driving **Replacing drivers to improve safety, cost & efficiency**		Autonomous mobility is the matter of the day. Key topic for suppliers & OEMs.	★★★	First players within autonomous mobility established. Hype has calmed down.	★★☆
Digitization **Big Data analytics, connectivity & AI**		Digitization & connectivity in discussion. Focus e.g. on Industry 4.0.	★☆☆	Digitization of business models fully underway. New sales chan-nels and products.	★★☆
Electrification **Hybrid or electric powertrains, batteries, and electric actuation**		OEMs and suppliers heavily investing in electrified mobility as a future market	★★☆	More and more car models on the road. Suppliers need to decide if they intensify their activities as well.	★★★

Source: Roland Berger/Lazard

The change in the automotive industry is gaining speed, affecting the market landscape, product portfolios and required employee skills

Current developments within the automotive industry

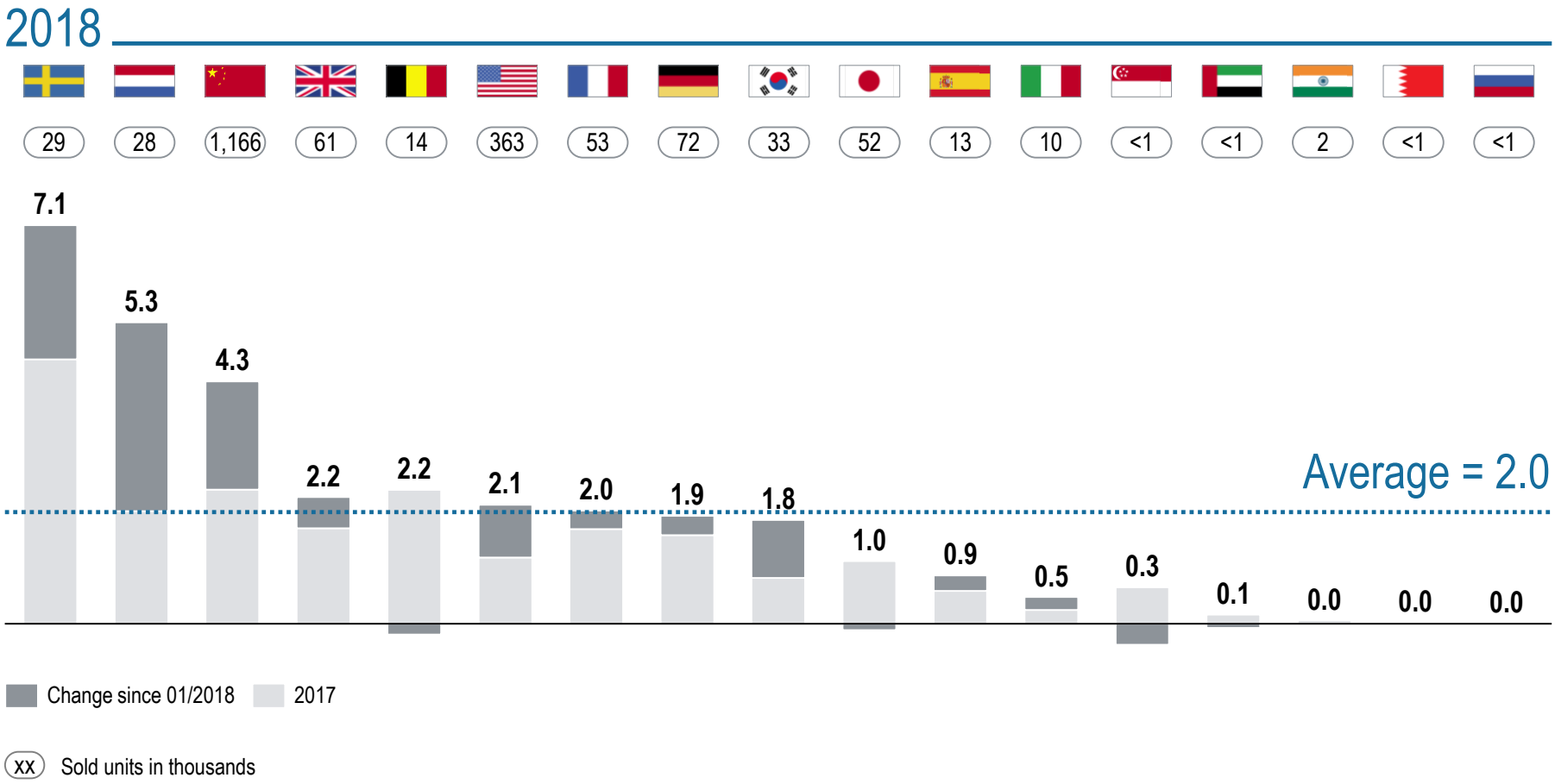


1. **Prerequisites for electric vehicles constantly getting better**, e.g. further emission regulations and ICE city bans, decreasing battery costs or improving infrastructure
2. Beside new forms of mobility also the **mobility mix itself is changing**
3. **Uncertainty remains over technical development path** and legal framework for autonomous driving
4. Data-based and **digital business models enable new** business **potential**
5. **Sales potential for certain products likely to fall dramatically**
6. **Customers continue to push suppliers** for cost reductions
7. **New players enter the automotive business** across the entire value chain
8. **Required employee skill-set** is **changing** dramatically
9. **Access to capital is expected to become tougher** given a shrinking relative attractiveness of the automotive sector

Source: Roland Berger/Lazard

Sales numbers for electrified cars still low – But, despite the automotive market cool-down in H2/2018, all markets saw growth for xEV

EV/PHEV/FCEV sales in 2018 [% of total vehicle sales]



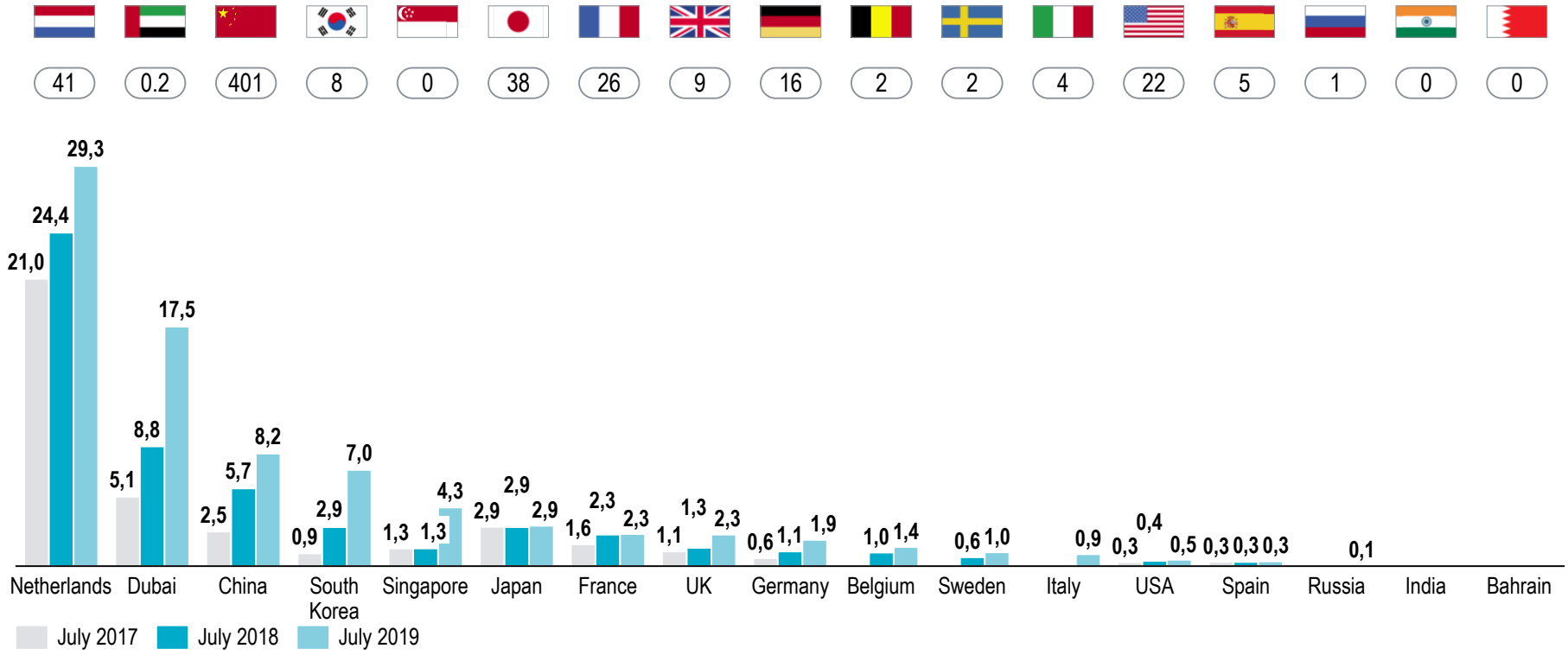
Source: EV volumes, IHS, Roland Berger/Lazard

LAZARD Roland Berger

The charging infrastructure for electrified cars is gradually getting better – But still many countries have a long way to go

Infrastructure: Charging infrastructure [charging stations per 100 km roadways]

Jul -17 / Jul -19



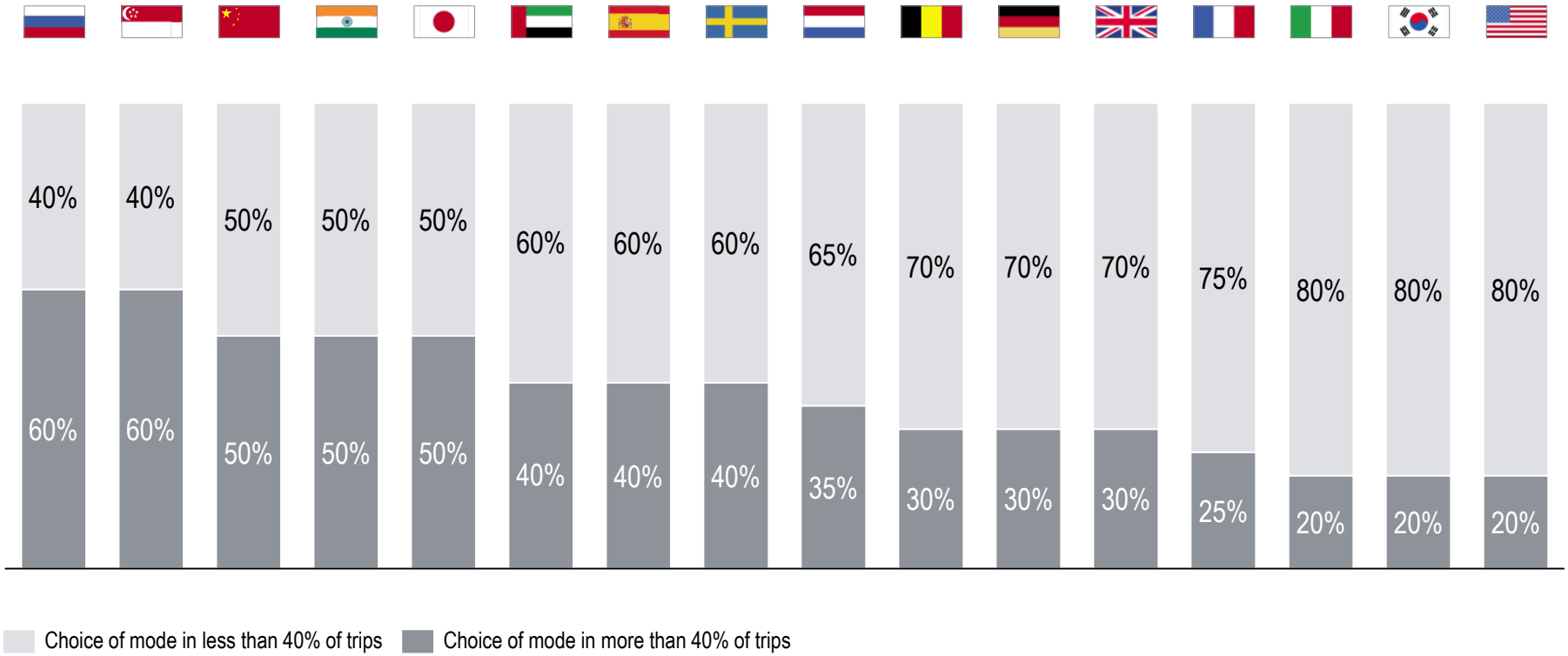
(xx) : # charging stations ('000)

Source: EV Volumes, Desk research, Roland Berger/Lazard

Especially in Asia the majority of people already have the opportunity to decide between different mobility modes – Limitations in EU/US

Multimodal mobility – Offer in terms of transportation modes

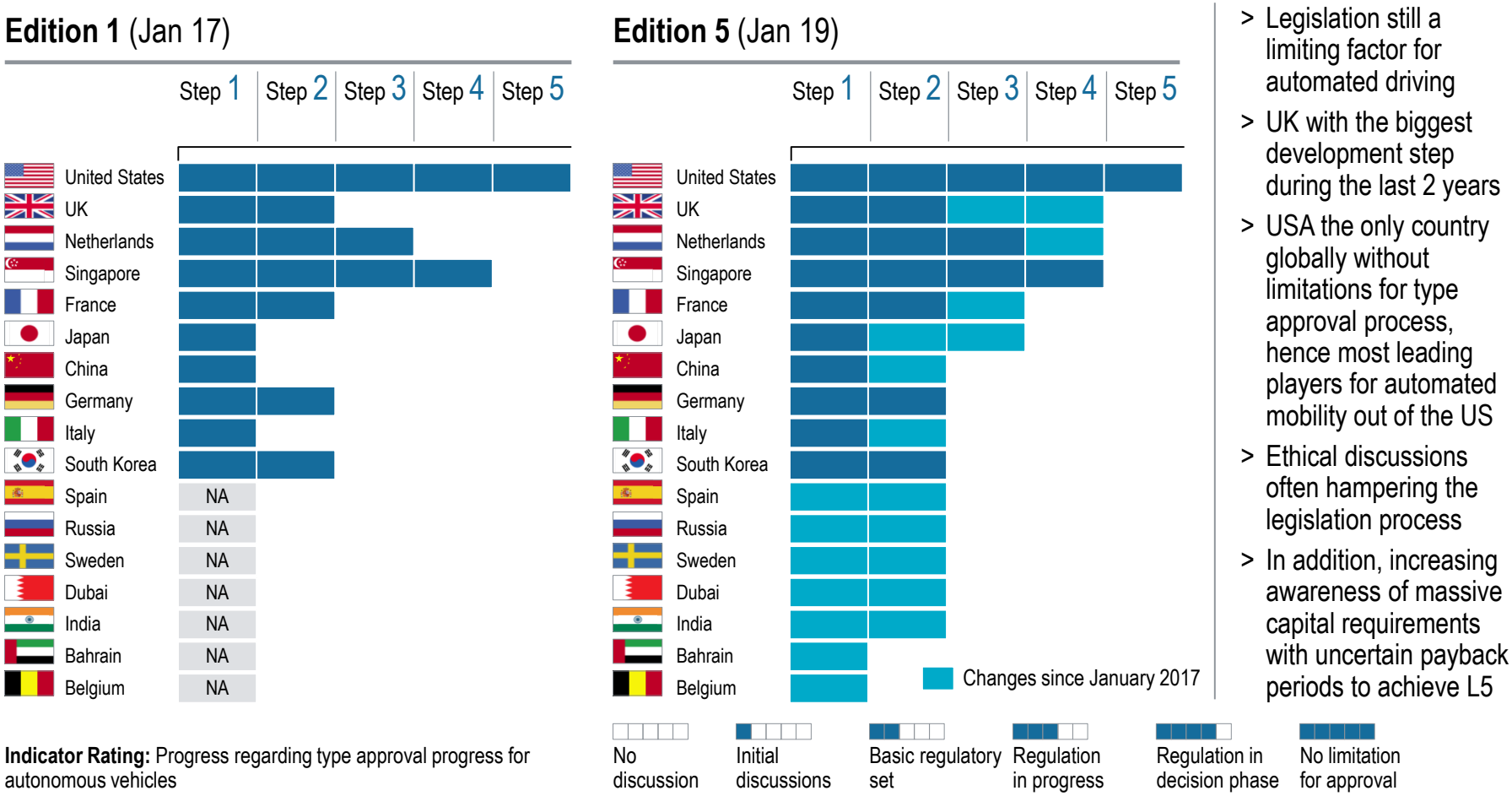
On all the trips you took, how often did you have the choice for a different mode of travel?



Source: RB online survey Jan 2019: 16,180 participants - Participants by country: Belgium 1,004; China 1,006; France 1,006; Germany 1,004; India 1,008; Italy 1,012; Japan 1,060; Netherlands 1,001; Russia 1,011; Singapore 1,004; South Korea 1,009; Spain 1,009; Sweden 1,001; UAE 1,009; UK 1,036; USA 1,01; Lazard

The legislative framework for autonomous mobility gets better – However, L5 blanket coverage still has a long way to go

Evolution of approval process for autonomous driving levels L4 & L5



- Legislation still a limiting factor for automated driving
- UK with the biggest development step during the last 2 years
- USA the only country globally without limitations for type approval process, hence most leading players for automated mobility out of the US
- Ethical discussions often hampering the legislation process
- In addition, increasing awareness of massive capital requirements with uncertain payback periods to achieve L5

Indicator Rating: Progress regarding type approval progress for autonomous vehicles

Source: Roland Berger Automotive Disruption Radar, Lazard

The digitization of the industry is well underway, but only technology system integrators or new players can fully leverage the potential

Digitization steps in the automotive industry

1 Digitization of business processes

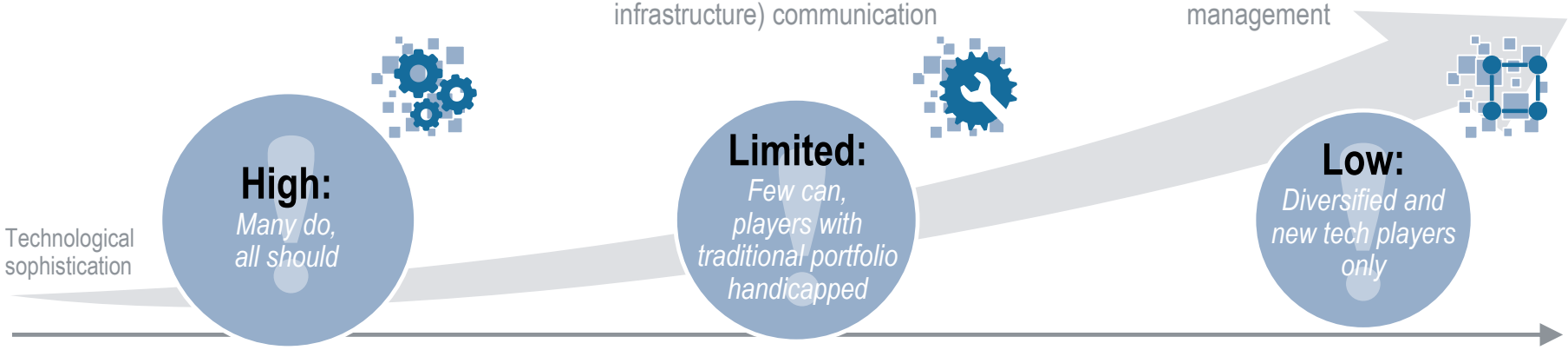
> Workflow automation and RPA to digitize inter- and intracompany business processes (e.g. P2P, PEP) and standardized tasks
> Industry 4.0 solutions for shop floor automation (e.g. predictive maintenance, testing)

2 Digitization of products and services

> Capturing of product and customer data for additional services, e.g. telematics and predictive service offerings
> Introduction of smart products, traceability and mobility solutions, or infotainment features
> Car connectivity and V2I (vehicle to infrastructure) communication

3 Digitization of entire business models

> Introduction of disruptive business models, e.g. mobility-as-a-service
> Cloud-based service offerings
> Innovative applications, e.g. mobility apps, eCar wallets
> Digitization of sales channels
> Use of blockchain technology for e.g. IoT, smart contracts, fleet management

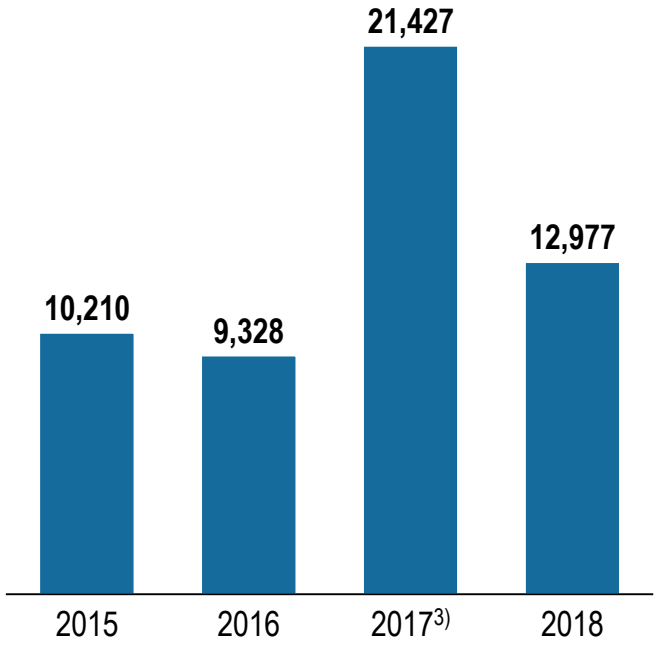


Source: Roland Berger/Lazard

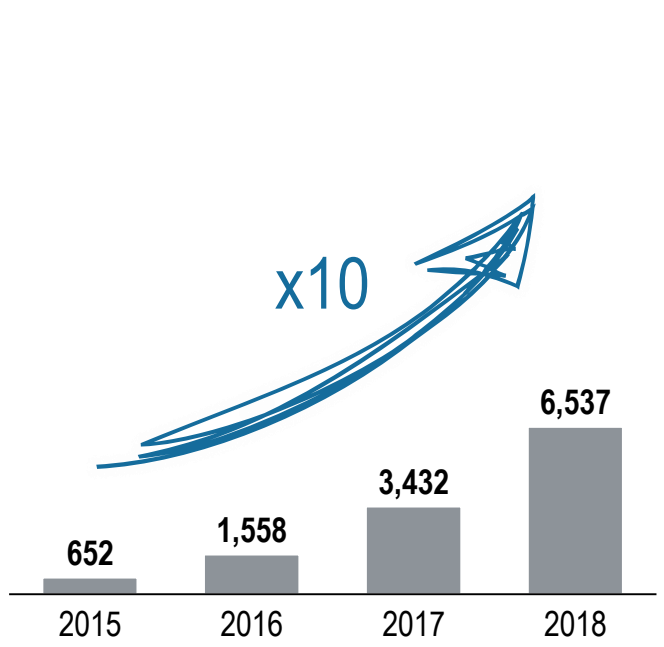
Since 2015 more than EUR 60 bn of venture capital has been invested into new automotive technologies and players

Invest in venture capital[1]: Mobility and artificial intelligence [USD m]

Total VC invest –
Mobility



Total VC invest –
Artificial intelligence[2]



- VC funding of new automotive technologies is extremely high
- While investments in mobility themes have been high for a few years, artificial intelligence is becoming the hot topic in terms of technology recently
- With external financing, new players can catch up with large established players in the market

1) Analysis on disclosed amounts
2) Including investments in smart cars, AI in transportation and autonomous vehicle technologies, and AI infrastructures (natural language processing, computer vision, etc.)
3) Fueled by several large funding rounds (e.g. Didi, Lift, Grab, et al.)

Source: Tracxn, Roland Berger/Lazard

Traditional OEMs are facing pressure from many sides, not only in new expansion areas but also in their core business

Pressure on traditional OEMs

Electric mobility 2025

- **More intensive competition** due to new entrants with advantages over established players
- **Falling margins** due to electrified vehicles either because of simplified (BEV) or more cost intensive (HEV) powertrain
- **Lower EBIT** due to rising costs and portfolio shifts
- **High investments** in powertrain electrification and new technologies
- **High costs** associated with personnel transformation

New mobility concepts 2025

- **New Maas business slower** than expected to ramp up
- **Fierce competition** due to new entrants with advantages over established players
- **Late to follow-up:** Traditionally leading OEMs in follower position
- **Strong need for investment** into automated driving and artificial intelligence and to scale up
- **Decreasing brand loyalty** and design relevance

> High **pressure on OEM margins** from e-mobility and new-mobility concepts
> In addition, further pressure from **emission regulations and potential fines**
> **OEMs** will try to, at least partially, **pass negative effects** on their earnings **to their supply base**

Positive impact on business | Negative impact on business | Neutral

Source: Roland Berger/Lazard

Coherently, OEMs have announced large cost-saving programs, which all have a major material-cost-reduction component

Recent efficiency programs of major OEMs (illustrative selection)

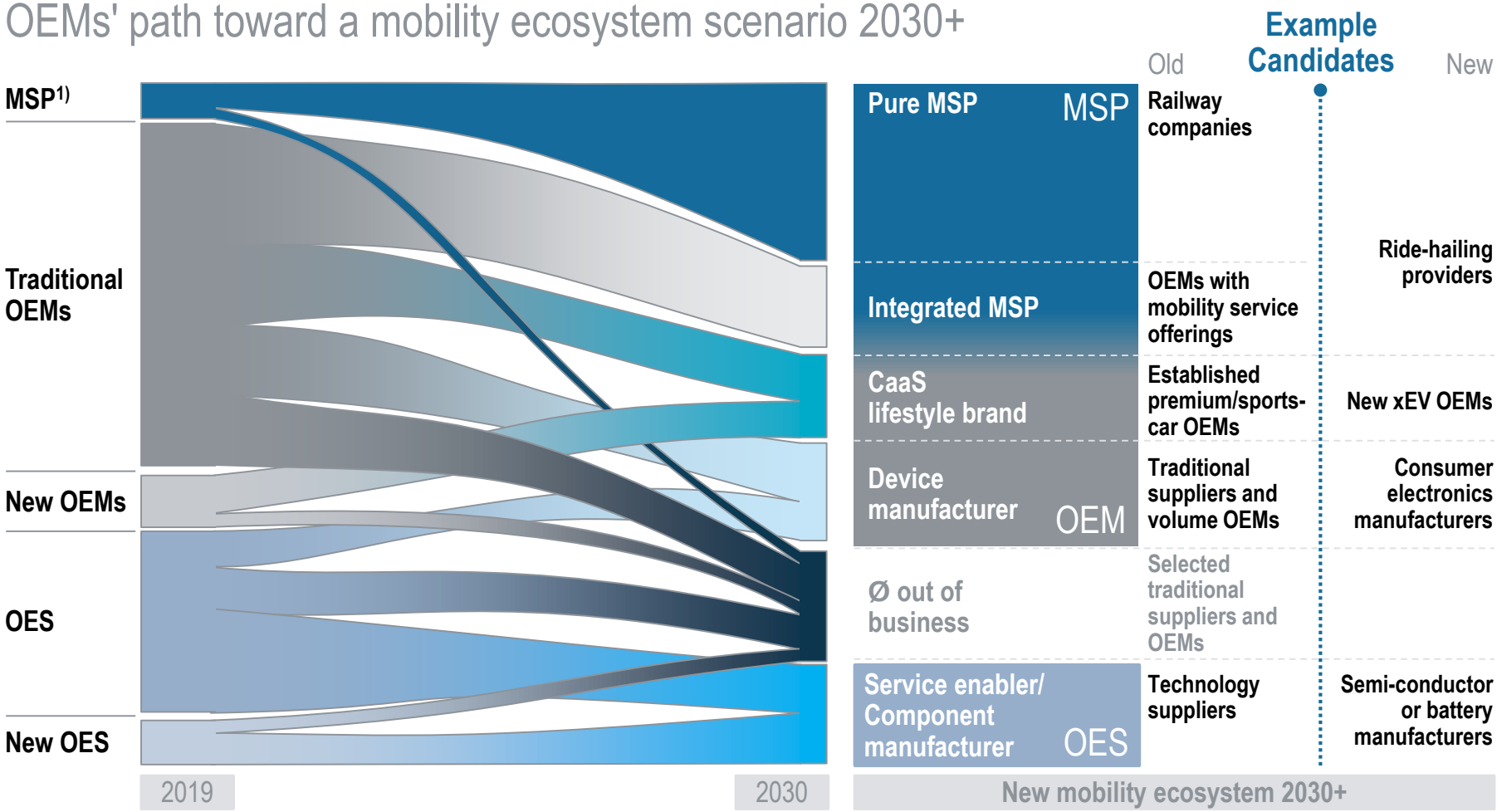
OEM	Improvement targets	Examples of levers
General Motors	4.5 USD bn cost reduction by 2020	> More efficient production > Leaner product portfolio > **Reduction of material costs**
Porsche	6.0 EUR bn op. result by 2025	> More efficient production > Digital business models > **Reduction of material costs**
Mercedes-Benz	4.0 EUR bn op. result by 2025	> More efficient production > Quicker introduction of new products > **Reduction of material costs**
Jaguar/ Land Rover	2.5 GBP bn cash flow by mid-2020	> Layoffs > Reduction of non-product investments > **Reduction of material costs**

- Cost-saving programs are one of the most promising measures for OEMs to handle their current challenges
- Nearly **all large cost-cutting programs have a material-cost-reduction element**, thus are targeting the supply base
- Suppliers have to define measures to defend themselves against cost-saving programs and to handle their financing requirements in parallel

Source: Handelsblatt; Wirtschaftswoche; Reuters; General Motors; Daimler; Jaguar/Land Rover; Porsche, Roland Berger/Lazard

Successful new market entrants leverage a non-automotive mindset and technological innovations to capture parts of the future business

OEMs' path toward a mobility ecosystem scenario 2030+

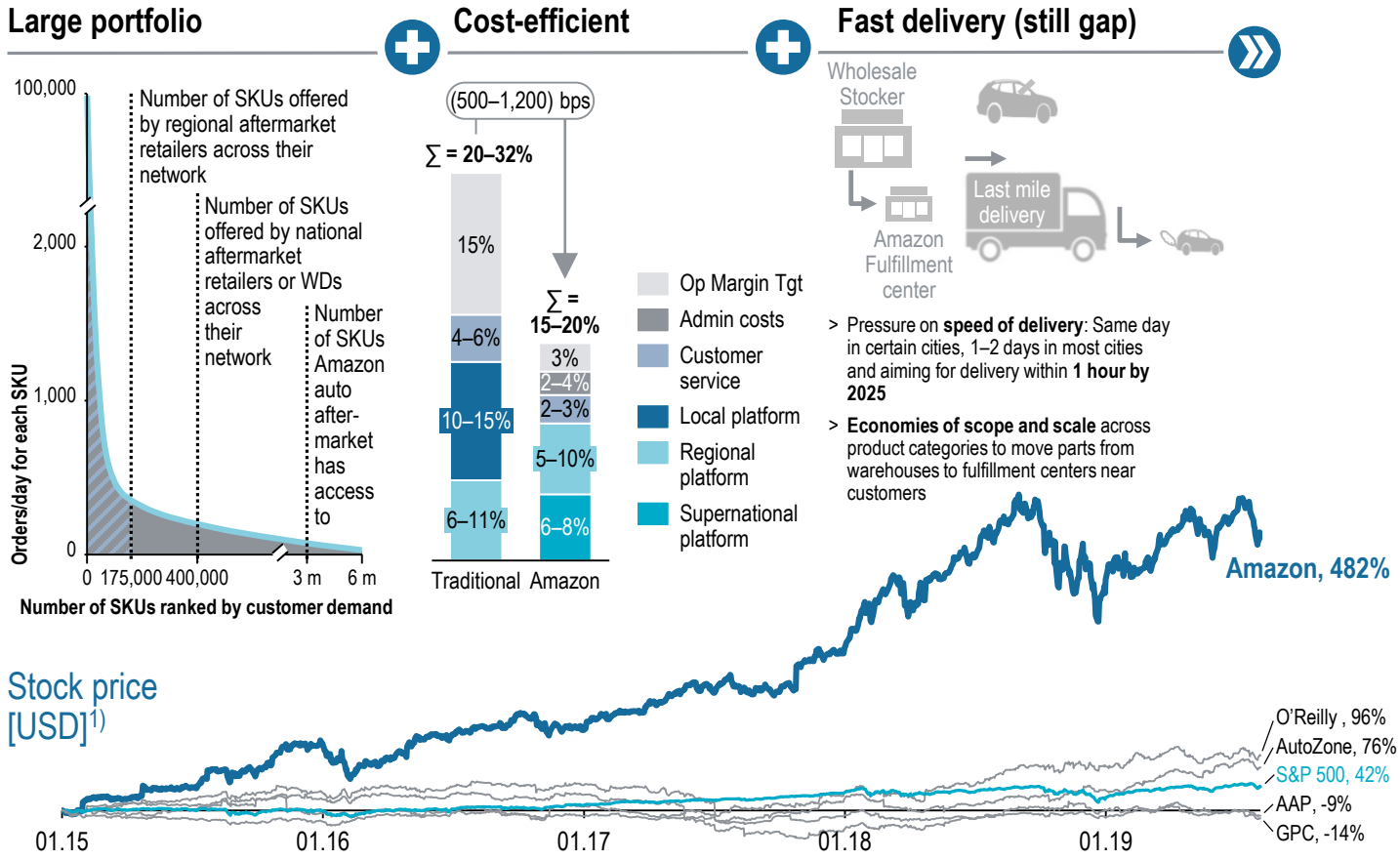


1) MSP = Mobility Service Providers

Source: Roland Berger/Lazard

Players like Amazon enter different areas of the market and win on scale, coverage or pricing, and even offer better user experience

Focus trend: E-commerce players' positioning in automotive aftermarket in the USA



1) Stock price information as of Aug 9, 2019

- Amazon sales in the automotive aftermarket already passed the USD 1 bn milestone
- Amazon not only offers parts for Do-It-Yourself but also services for Do-It-For-Me
- Amazon leverages its sales channels for B2C as well as for B2B
- Except body parts and software, the portfolio already covers the whole aftermarket bandwidth
- Differentiation factor is a better service experience for the clients (delivery time, all out of one hand, etc.)

Source: Roland Berger/Lazard

The changing influence on the supplier business models through new technologies are also reflected in required employee skill-sets

Importance of necessary skill-sets and change in job vacancies

	2000	2018	2025ff
Mechanical engineering			
Software engineering	> **Milestones** in mechanical engineering > Electronics limited to **simpler**, not differentiating applications > Unique characteristics for differentiation mainly in the domains of **handling** and **engine performance**	> Mechanical parts start to offer **limited or less potential** for further improvement > Advanced driving assistants implemented with **scattered software solutions** > Unique characteristics for differentiation split across the domains of **eco-friendliness**, **individualization** and **infotainment**	> Mechanical parts and engine performance have become **commodities** > **Fully integrated software solutions** offer unique driving experiences, including autonomous driving > Differentiation by **comfort**, **autonomy** and **additional services**

Change in job vacancies[1)]

Mechanical engineer

2017 2018 **-21%**

Software engineer

2017 2018 **+56%**

IT specialist

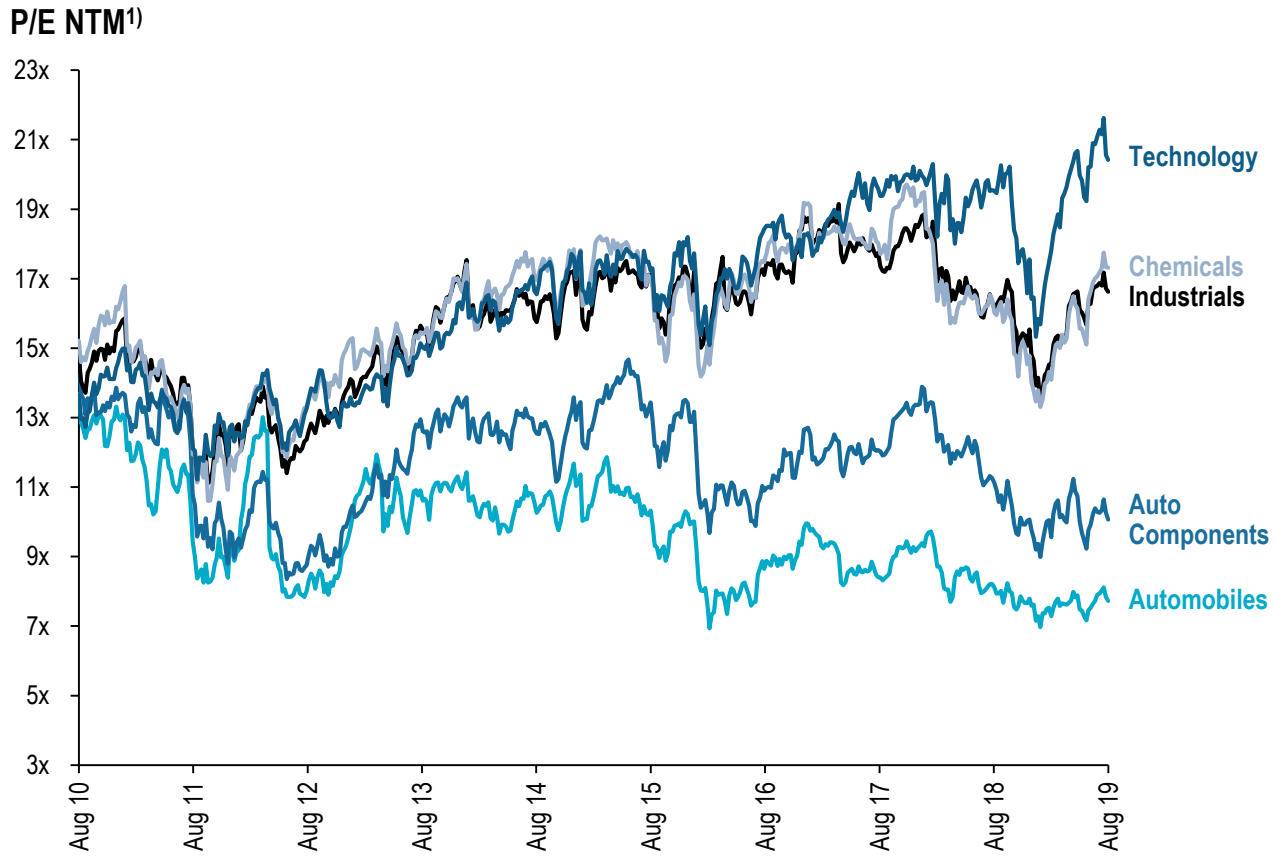
2017 2018 **+14%**

1) Based on engineering jobs in Germany

Source: Roland Berger/Lazard, Verband Deutscher Ingenieure, absolventa, karriere.de

The relative sentiment of the automotive sector vs. other industries has been deteriorating in the last decade

Evolution of sector P/E valuations in equity capital markets



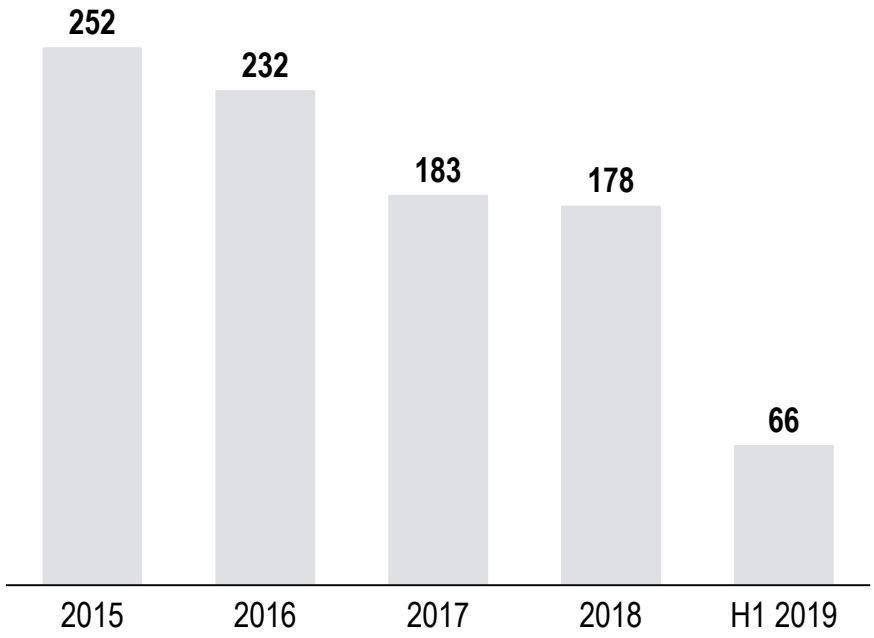
1) NTM = Next twelve months

- Equity capital markets valuation levels of the automotive sector have been **close to other industries a decade ago**
- However, over the past years, **the gap has widened** – equity investors have increasingly been willing to pay **higher prices for other sectors**
- Whereas other industries benefited from the generally positive macroeconomic and capital markets environment, **automotive companies saw rising concerns on their industry**

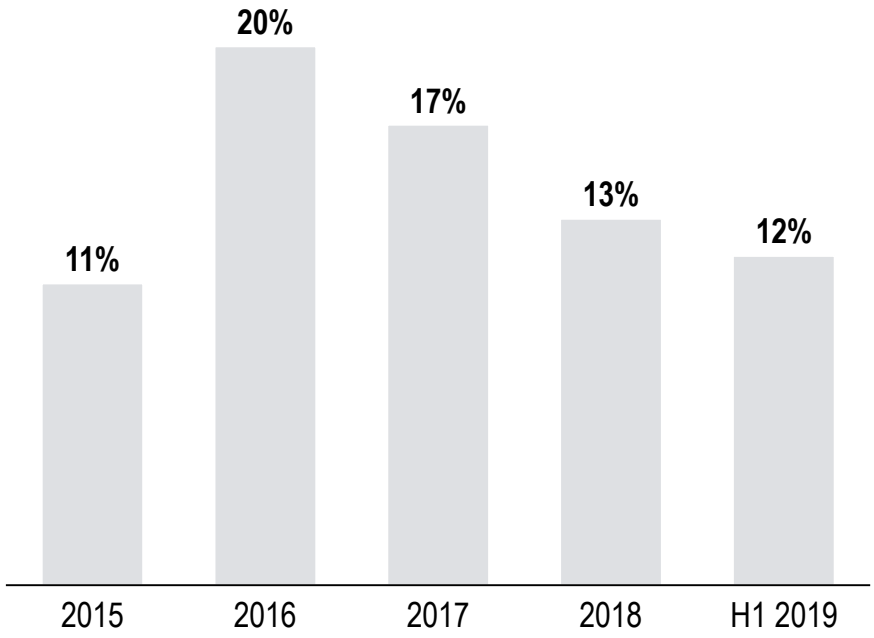
Source: Bloomberg, Roland Berger/Lazard

Automotive M&A activity has slowed down substantially – Especially Chinese acquirers as important buyer group have become less active

of automotive supplier M&A transactions



Share of Chinese M&A activity in the supplier space



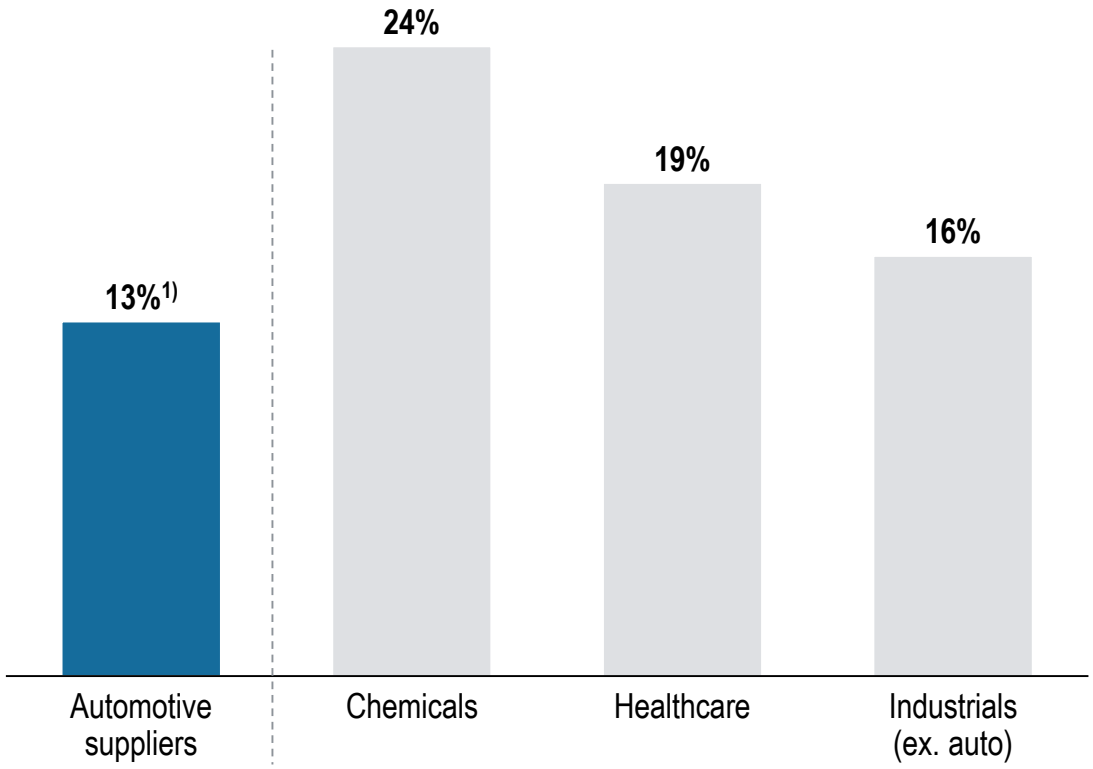
Environment becomes more difficult – especially for smaller suppliers looking for a sale or merger

Note: Transactions considered: announced/completed, >75% stake, automotive suppliers, worldwide

Source: Dealogic, Roland Berger/Lazard

Especially smaller suppliers are faced with comparably limited access to private equity capital and rising cautiousness on the credit side

Share of private equity buyers in mid-cap M&A transactions (2018)[1)]



Note: Transactions considered: announced/completed, >75% stake, worldwide with disclosed deal value

Source: Dealogic, Roland Berger/Lazard, Press

1) Deal value between EUR 100 m and EUR 500 m; i.e. 13% of buyers were private equity buyers, while 87% were strategic acquirers 2) Translated

Selected debt capital and rating views

"We expect a further increase in receivable risk in the automotive industry, especially driven by vanishing liquidity levels of small and mid-size automotive suppliers. The current level of risk is the highest since the financial crisis and we expect an increasing number of insolvencies and payment defaults (increase of up to 30%) in the automotive supplier industry in the medium term."

ATRADIUS – APR-2019[2)]

"New technologies require automotive suppliers to make a substantial investment resulting in an additional need for financing. However, simultaneously banks are becoming more cautious with regards to traditional lending in the automotive sector, as the industry and corresponding rating recently have come under pressure. Some banks even indicated their general reluctance to increase the exposure in the automotive sector."

DR. WIESELHUBER & PARTNER – APR-2019[2)]

"Weakening demand for cars and trucks has pushed credit rating company Moody's to cut its outlook for the auto industry from stable to negative. Slowing economic growth, a better-than-expected end to 2018 and a host of potential political pitfalls are all expected to dampen global auto sales in 2019, Moody's said in a research note Monday."

CNBC – MAR-2019

In 2018 many suppliers have streamlined their portfolios or invested in further growth through M&A – Lower activity in 2019 so far

Selected automotive supplier acquisitions, 2014–2019 (YTD)

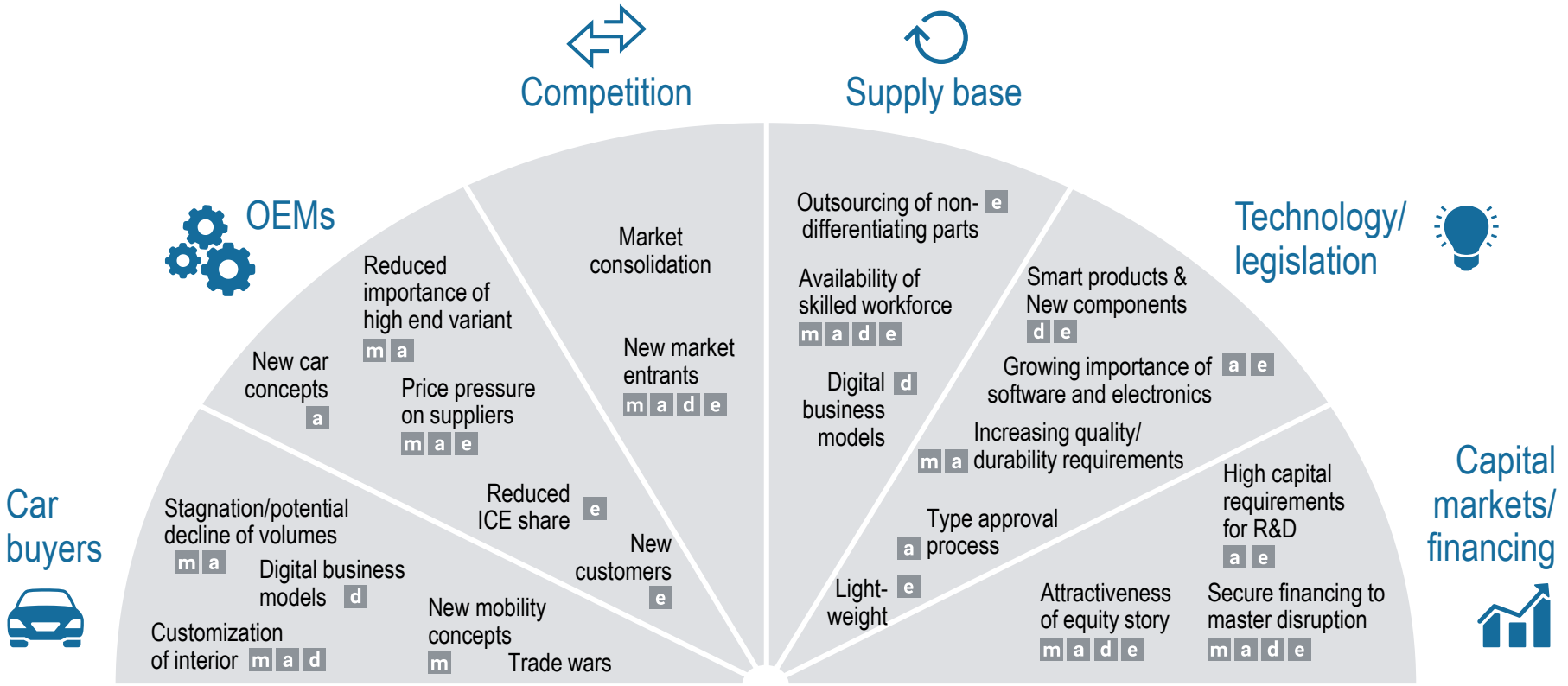
2014	2015	2016	2017	2018	2019
Amtek/ Kaiser	**AVIC Automotive/** Henniges	**American Axle/** Metaldyne	**BorgWarner/** Sevcon	**Asahi Kasei/** Sage Automotive Interiors	**Autokiniton/** Tower International
Amtek/ Kuepper Group	**BorgWarner/** Remy International	**CIE Automotive/** Grupo Amaya Telleria	**CIE Automotive/** Newcor	**Calsonic Kansei/** Magneti Marelli	**Bridgestone/** TomTom Telematics business
AUNDE/ Fehrer	**China National Tire/** Pirelli	**Freudenberg/** TBVC	**Fountain West/**Bosch Mahle Turbo Chargers	**CIE Automotive/**Inteva Products (Roof systems)	**CIE Automotive/**Maquinados de Precisión de México
AVIC/ Hilite	**Continental/** Elektrobit	**Illinois Tool Works/** TRW Auto. Elec. & Comp.	**Fuxin Dare Automotive/** Carcoustics	**Continental/**Cooper Standard (AVS business)	**Hitachi Automotive/**Chassis Brakes International
AVIC/ KOKI Technik	**Delphi/** HellermannTyton	**Mecaplast/** Key Plastics	**Genuine Parts/** Alliance Automotive	**Dana/** Oerlikon Drive Systems	**Meritor/** AxleTech
Bosch / ZF Lenksysteme	**Grupo Antolin/** Magna interior business	**Megatech/** Boshoku Europe	**Intel/** Mobileye	**Faurecia /** Clarion	**Michelin /** Multistrada
Delphi/ Unwired Technology	**Harman/** Symphony Teleca/Redbend	**Musashi Seimitsu/** Hay	**KSS/** Takata	**Hanon Systems/**Magna Fluid Pressure & Controls business	**Nidec/**Omron automotive electronics business
Federal-Mogul/ TRW valves business	**Johnson Electric/** Stackpole	**Ningbo Joyson/** KSS	**Lear/**Grupo Antolin (Seating & Metal Business)	**LG Electronics/** ZKW Group	**ZF/** WABCO
Lear/ Eagle Ottawa	**Linamar/** Montupet	**Plastic Omnium/** Faurecia exterior bus.	**Luxshare/** ZF Body Controls	**Magna/** Olsa	
MAHLE/ Letrika	**Magna/** Getrag	**Samsung/** Harman	**Motherson Sumi Systems/**PKC Group	**Methode Electronics/** Grakon	
Sensata/ Schrader	**MAHLE/** Delphi thermal business	**Valeo/** FTE Automotive	**Superior Industries/** Uniwheels	**MinebeaMitsumi/** U-Shin	
Shanghai Prime Machinery/ Nedschroef	**Mann+Hummel/** Affinia	**Valeo/** Ichikoh	**TE Connectivity/** Hirschmann Car Comm.	**Motherson Sumi Systems/**Reydel Automotive FR	
Visteon/ JCI auto. electronics bus.	**NGK Spark Plug/** Wells Vehicle Electronics	**VBP Group/** Mobile Climate Ctrl. Group	**WABCO/** RH Sheppard	**Ningbo Jifeng/** Grammer	
ZF/ TRW	**Valeo/** Peiker Acustic	**Yinyi Group/** Punch Powertrain	**ZMJ/CRCI/** Bosch SMG	**Tenneco/** Federal-Mogul	

Key: Acquirer/Target
Note: Excluding financial sponsor–led transactions. Some 2019 transactions are signed, but not yet closed.

Source: Dealogic, Merger Market, press research, Roland Berger/Lazard

In the medium term, focus is shifting toward challenges like digital business models, required R&D financing and availability of talent

Mid-term supplier CEO radar screen



Source: Roland Berger/Lazard

Contents

A

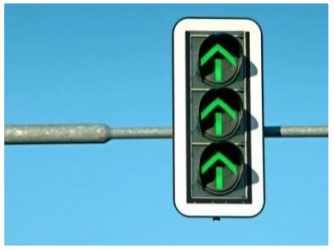
The status

Increasingly difficult environment after record profits until last year

B

The future

The transformation of the automotive industry is well underway



C

The strategies

Suppliers have different opportunities to prepare for the future

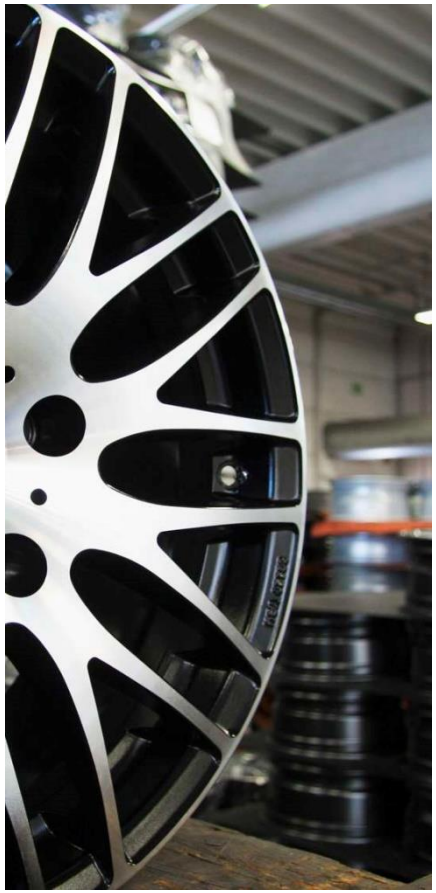
D

The contacts

Roland Berger and Lazard Automotive teams

The predicted transformation of the automotive industry becomes reality – Suppliers have to find their individual strategy to deal with it

Current situation for automotive suppliers



1. The **automotive industry is at the edge** – Projected changes are becoming reality at high speed
2. The **changes affect** the **clients**, the **products,** the **employees** and the **legislative framework**
3. The **time to act** and to prepare for the future is **running out quickly**
4. **All suppliers** have to deal with the same market situation but **need to find individual answers** !
5. **Automotive suppliers have to identify** which market **changes** are most **relevant for them** !

Source: Roland Berger/Lazard

We identified four basic criteria as a framework for the development of individual strategies of how to cope with the changing industry

Basic parameters for strategy development

Company size – Revenues/sales

Size of the company predetermines:

> Market power/shares
> Resource availability
> Brand recognition
> Boundaries and flexibility

Mega-player or start-up?

Financial strength – Margin/financing

Financial strength takes into consideration:

> Growth, margin and free CF generation
> Net debt and leverage
> Access to large credit lines/debt capital markets or additional equity

Benchmark or restructuring case?

Product portfolio – Product variety

Reflects the technological basis:

> Portfolio commoditization
> Manufacturing and R&D skill-set
> Digital vs. physical products
> Single parts vs. components/assemblies

Focused or diversified portfolio?

Market environment

Reflects pressure level in home/new markets

> Attractiveness for other players to attack the same market/domain
> Current price levels
> Growing market vs. shrinking market

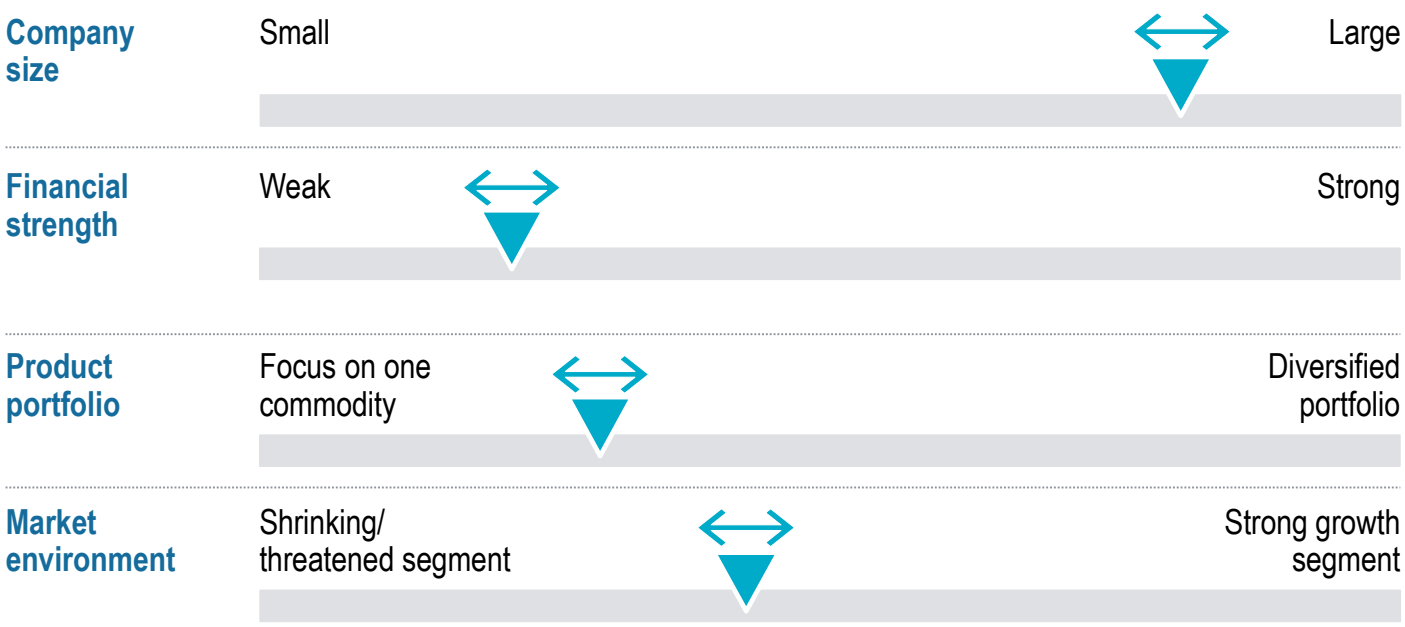
Competition or co-existence?

Source: Roland Berger/Lazard

To point out differences in strategy approaches we have clustered suppliers by size, financial strength, portfolio and market environment

Supplier archetype[1)] categorization – Methodology

Archetype assessment criteria



Cluster	Company size	Financial strength	Product portfolio	Market environment
	Large company	Weak/under-financed	Commod-itized	Shrinking/ threatened

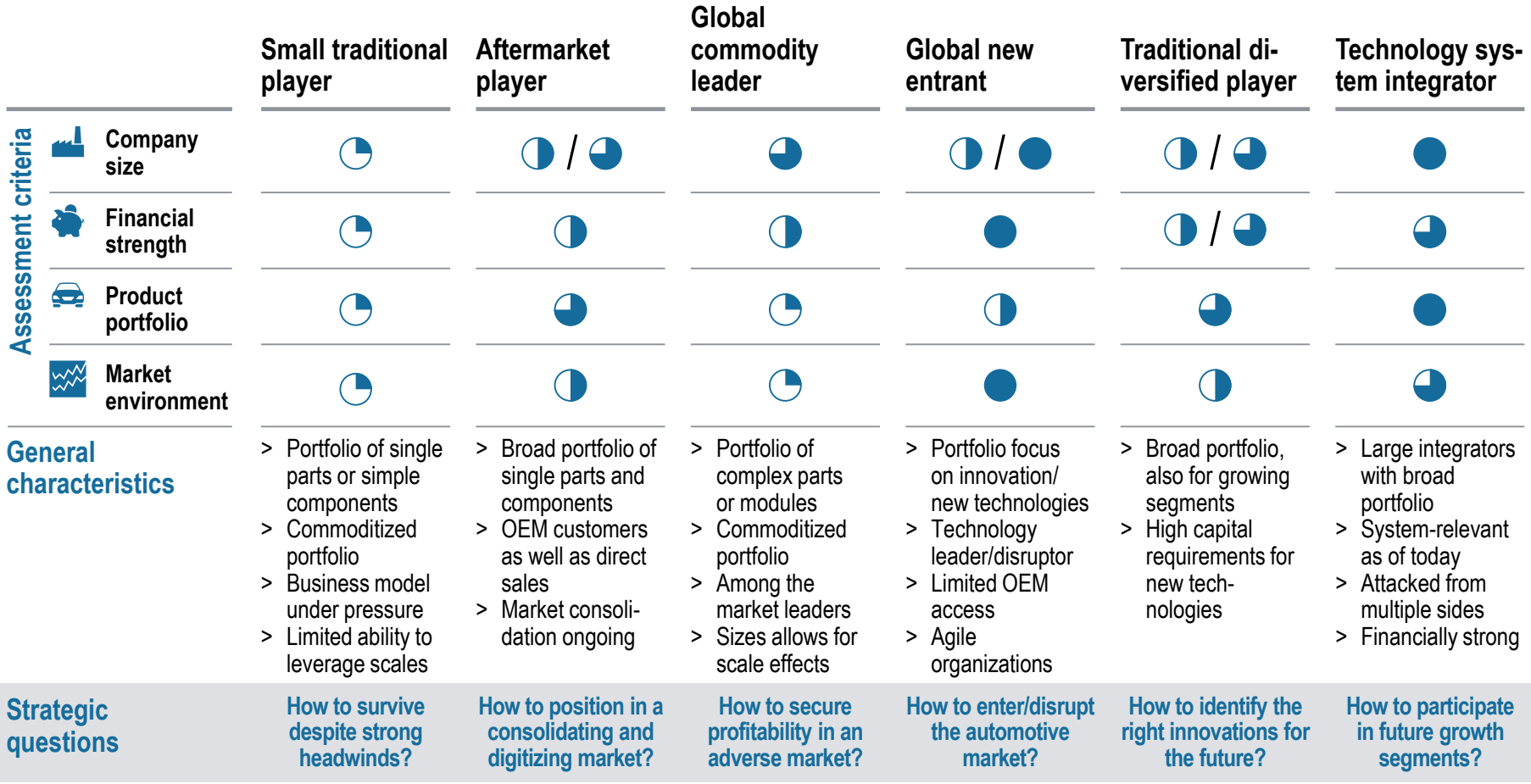
Company represents a larger commodity player, e.g. a die-casting supplier or a body-parts supplier with sales of more than EUR 1 bn p.a., which is fully focused on traditional ICE automotive business

1) Archetypes are not all-encompassing, attribution can be ambiguous

Source: Roland Berger/Lazard

Six supplier archetypes represent the most common players within the automotive supplier industry

Supplier archetypes



Source: Roland Berger/Lazard

Exemplary strategic mission statements for the archetypes show that suppliers should adjust strategies to their specific situations

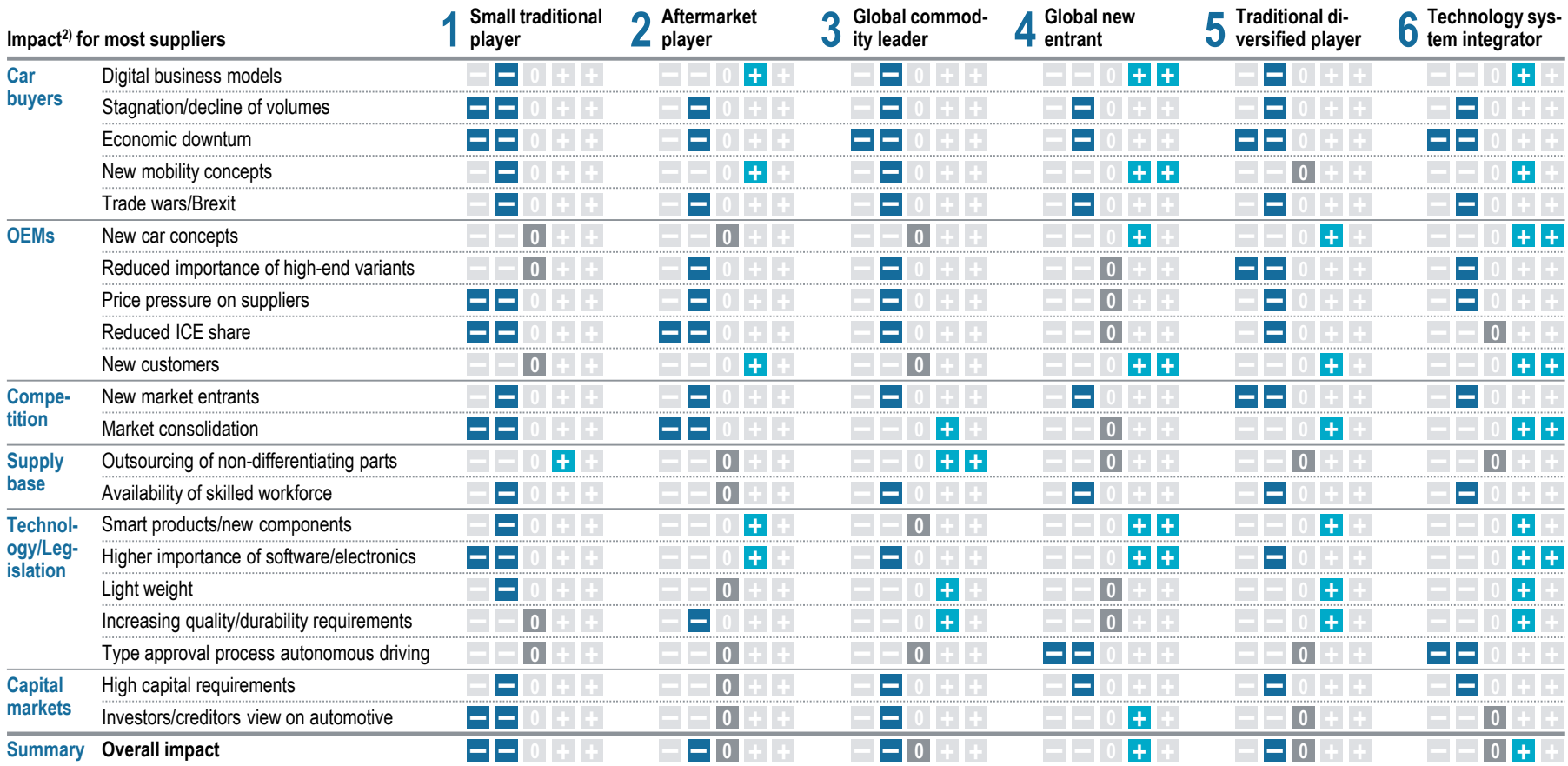
Top challenges per supplier archetype

Archetype	Selected top challenges		Strategic mission statement
Small traditional player	> Price pressure > Potential volume decline > Electrification and digitization	> Secure long-term funding > Scale effects & Industry 4.0 > Attracting talent	**Survival of the fittest** – Cost optimization throughout the entire organization is key
Aftermarket player	> Electric vehicles > Market consolidation > Low-cost competitors	> Client structure (end client, OEM, mobility provider) > Upcoming digital products	**Eat or be eaten** – Compensate for negative business implications from e-mobility trend
Global commodity leader	> Price pressure > Potential volume decline > Electrification and digitization	> Industry 4.0 > Capital requirements > Platform projects	**Defend current positioning** – Process excellence is the basis to generate capital and to ensure long-term success
Global new entrant	> Automotive standards > Customer access > Established competitors	> R&D expenses > Workforce availability > Technology acceptance	**If you can think it, you can do it** – Leverage existing know-how to generate new business within automotive industry
Traditional diversified player	> Price pressure > R&D expense allocation > Portfolio commoditization	> Internal cultural change > Increasing competition for growth segments	**Offense is the best defense** – Focus on cost-efficiency or proactive portfolio transition to future growth segments
Technology system integrator	> Electrification and digitization > Autonomous driving > Breaking up of systems	> Increasing competition > Financing needs > Internal cultural change	**Remain system-relevant** – Make the company irreplaceable for OEMs and leverage positioning into new fields

Source: Roland Berger/Lazard

The business models of many automotive suppliers appear to be at risk

MADE[1] impacts by supplier archetype



−− − 0 + ++ Impact on supplier business: (strongly) negative, no impact, (strongly) positive 1) M = Mobility A = Autonomous D = Digitization E = Electrification 2) Relative to each other

Source: Roland Berger/Lazard

Small traditional players have to find answers for the increasing price pressure and potential volume downturns

Top challenges and rationales for most small traditional players

Price pressure, missing scale effects and Industry 4.0	> Major OEMs have issued performance-improvement programs > High capital requirements on OEM side to finance R&D expenses or potential fines for exceeded emission limits > Low manufacturing volumes, small client base and sometimes limited global presence aggravate realization of scale effects > Digitization and automation in operations required to maximize performance > Industry 4.0 solutions require substantial investments
Declining volumes	> Possible economic downturn in the short term/mid term > Higher car utilization ratio due to shared mobility concepts and autonomous driving in the long term
Electrification and digitization	> Changing car concepts require a different product portfolio from suppliers > Increasing importance of lightweight solutions to increase EV range > Car-as-a-service trend causes shift away from lucrative high-end variants as not-owned cars become less of a status symbol
Securing long-term funding	> Creditors more cautious with long-term commitments especially for small suppliers in domains at risk > Difficult to find equity investors at the same time
Attracting talent	> Small companies struggle to attract the right talent due to limited brand recognition or unfavorable location

Need for action

How to survive despite strong headwinds?

Source: Roland Berger/Lazard

A promising way for most small traditional suppliers is to fully focus on performance improvement

Strategic direction of most small traditional players

Favorable actions

- Set up a holistic performance excellence/improvement program for overhead, operations and R&D
- Free up cash with efficiency program
- Outsource non-core competencies
- Re-think/adjust geographical footprint
- Program to automate shop-floor processes
- Secure long-term funding flexibility and sufficient equity ratio
- Actively consider merger/disposal options

Adverse actions

- Do nothing, because changes seem to be far away
- Develop portfolio toward non-automotive, if time-/resource-intensive or experience is missing
- Focus on product portfolio diversification, if it is time-/capital-intensive
- Develop capital-intense growth areas where no expertise is in-house
- Build-up FTE in traditional functions and worsen cost structures

Strategic mission statement

Survival of the fittest – Cost optimization throughout the entire organization is key

Source: Roland Berger/Lazard

Most aftermarket players have to deal with strong market consolidation and electric cars as a threat to their business in the long run

Top challenges and rationales for most aftermarket players

Electric vehicles	> Electric vehicles consist of far fewer parts than traditional ICE vehicles > Durability of electric powertrain components considered higher than that of ICE components > Risk of obsolete production capacities for aftermarket part manufacturers in the long term
IAM[1] Industry consolidation	> In the independent aftermarket, strong industry consolidation is underway > Small aftermarket companies might be swallowed by industry giants > Market already partly dominated by large, multinational parts distribution groups
New competitors for commodities	> Aftermarket is attractive for either low-cost suppliers, especially from Asia or global online marketplaces, due to relatively low entry barriers > Overall very price-sensitive client base due to higher vehicle age – risk of being substituted because of lower client loyalty
Client structure	> Very different client groups (end customers vs. OEMs) to be handled > New client groups evolving, e.g. global mobility providers
Online sales and upcoming digital products	> Increasing importance of online sales channel > New online players evolving > Service-focused and customer-oriented business models gain importance

Need for action

How to position in a consolidating and digitizing market?

1) IAM = independent aftermarket

Source: Roland Berger/Lazard

Aftermarket players have to determine their strategy in view of significant consolidation activities within the market

Strategic direction of most aftermarket players

Favorable actions

- Approach new and/or emerging clients
- Develop digital sales channels
- M&A activities or co-operations
- Review and clean up product portfolio
- Optimize level of vertical integration (as part manufacturer)
- Working capital reduction program

Adverse actions

- Ignore trend of market consolidation on distribution side
- Stick to traditional aftermarket business only, since volume will decline in the long term
- Ignore new or emerging players and miss co-operation or future business opportunities
- Underestimate the disruptive impact of digital giants and face a declining relevance of today's sales channels
- Focus on hardware products only and miss software and/or digital business opportunities

Strategic mission statement

Eat or be eaten –
Compensate for negative business implications from e-mobility trend

Source: Roland Berger/Lazard

Most global commodity leaders need to optimize their cost structures and adjust their portfolio for future requirements in parallel

Top challenges for most global commodity leaders

Price pressure	> Major OEMs have all issued performance-improvement programs > High capital requirements on OEM side to finance R&D expenses or potential fines for exceeded emission limits
Potential volume decline	> Possible economic downturn in the short term/mid term > Higher car utilization ratio due to shared mobility concepts and autonomous driving in the long term
Electrification and digitization	> Changing car concepts require different product portfolio from suppliers > Increasing importance of lightweight solutions to increase EV range > Car-as-a-service trend causes shift away from lucrative high-end variants as not-owned cars become less of a status symbol
Industry 4.0	> Industry 4.0 requires substantial investments > Digitization and automation in operations required to maximize performance
Capital requirements	> R&D spending for lightweight solutions and advanced engineering due to new car concepts > Transformation process within operations needs to be financed
Platform projects	> Purchasing co-operations on OEM side as well as further efforts to leverage scale effects based on car platforms > Losing platform projects can become a serious issue for a supplier

Need for action

How to secure profitability in an adverse market?

Source: Roland Berger/Lazard

Leveraging process and shop-floor digitization potentials as basis for a sustainable profit improvement is key for global commodity leaders

Strategic direction of most global commodity leaders

Favorable actions

- Adjust product portfolio for future requirements
- Maximize product standardization and adjustment of product specifications
- Secure long-term funding/financial flexibility (still in good times)
- Consider add-on acquisitions to cement leading role
- Automation and process-optimization program
- Improve efficiency of overhead and of organization
- Development of new clients on OEM side

Adverse actions

- Seek potentials solely outside automotive to avoid to get bogged down in unknown areas
- Software/electronics as portfolio add-ons since catching up to established suppliers might be too difficult
- Make product intelligence the focus topic within R&D if current products aren't really allowing that
- Try to enter highly competitive service-/data-oriented business models as growth opportunities, since advantage of existing players is too large
- Underestimate future market changes

Strategic mission statement

Defend current positioning –
Process excellence is the basis for generating capital and ensuring long-term success

Source: Roland Berger/Lazard

For global commodity leaders, holistic performance-improvement programs are a suitable way to prepare the company for the future

Example: Global commodity leader performance-improvement program

Initial situation

- > Decreasing margins
- > Partly loss-making business
- > Increasing capital requirements
- > Declining equity ratio
- > Commoditized portfolio
- > Portfolio adaption and growth strategy failed

Program bandwidth in the project course

	One focus plant Starting point	Multiple focus plants Program extension	Company-wide focus plants Full-scale program
Plants/ locations	1	> 5	> 50
Regional focus	Country	Region	Global
Content focus	> Shop floor > Ind. material > Overhead	> Shop floor > Ind. material > Overhead	> Shop floor > Ind. material > Overhead > Sales > Central overhead > Direct material
Specialist support	**Local team, dedicated resources**	**Central team, dedicated resources**	**Central and local team with multiple resources**

Achievements

- > **4% absolute EBIT improvement over 3 years**
- > **More than EUR 100 m of working capital improvement**
- > **More than 2,000 individual improvement measures**
- > **Sustainable turnaround**

Source: Roland Berger/Lazard

Despite a leading-edge product, global new entrants have to deal with technological constraints and missing access to OEMs

Top challenges for most global new entrants

Automotive standards	> No familiarity with safety and traceability requirements > Product life cycles and business understanding differ significantly between automotive and other industries
Customer access	> No access to OEM purchasing or R&D organization > RFQs are only sent out to established suppliers > In terms of digital players, automotive OEMs are not only potential clients but also potential competitors
Competition	> Certain fields, e.g. battery or electronics, are attacked by multiple suppliers > Many new entrants with strong financial background
R&D expenses	> New technologies require companies to invest heavily in R&D during a time of an uncertain automotive future > Besides R&D expenses, lobbying also partially required
Workforce availability	> Fierce competition for talent especially in software development > Automotive hubs and new-technology hubs differ significantly
Technology acceptance	> Mistrust of end customers especially with regard to automated technologies or data security > Data privacy scandals and fraud are a burden for new technologies > Legal framework is more often than not the limiting factor

Need for action

How to enter/disrupt the automotive market?

Source: Roland Berger/Lazard

For global new entrants it is key to leverage their non-automotive innovations within automotive and to keep their innovation speed

Strategic direction of most global new entrants

Favorable actions

- Hire automotive-experienced staff ("buy teams")
- Co-operate with automotive OEMs
- Bring the product technology on the road by outpacing traditional automotive players
- Build up presence in today's automotive hubs
- Leverage non-automotive innovation for automotive applications

Adverse actions

- Slow down R&D efforts and innovation speed and lose the technological advance as a consequence
- M&A to acquire established automotive players to avoid adapting to traditional, long-cycle automotive processes (losing "can-do/let's-try" attitude)
- Transform into a traditional automotive supplier and become slower

Strategic mission statement

If you can think it, you can do it – Leverage existing know-how to generate new business within automotive industry

Source: Roland Berger/Lazard

Top challenges for traditional diversified players are the ongoing commoditization of parts of their portfolios and high R&D expenses

Top challenges for most traditional diversified players

Price pressure	> Major OEMs have all started performance-improvement programs > OEMs pass on reduced margins as well as increasing capital requirements to their suppliers > OEMs will further use platform concepts to increase volumes for purchased parts and to leverage scale effects
R&D expenses	> New technologies require heavy investment in R&D > Transformation within manufacturing processes needs to be financed (Industry 4.0 potentials)
Portfolio commoditization	> Autonomous driving and car-as-a-service will decrease importance of traditional car characteristics – hardware might become pure commodity > Car becomes less of a status symbol, hence shift away from lucrative variants
Cultural change	> Employees are used to success of the past years > Future changes and negative implications seem to be far off
Increasing competition for growth sector	> Many suppliers try to enter the same growth segments, e.g. for battery thermal management or interior functions > Established suppliers are being attacked by new entrants

Need for action

How to identify the right innovations for the future?

Source: Roland Berger/Lazard

Most important task for traditional diversified players is the transformation of their product portfolios toward future growth segments

Strategic direction of most traditional diversified players

Favorable actions

- Develop a long-term portfolio strategy
- Holistic performance improvement project for overhead and operations
- M&A activities to speed up portfolio transformation with acquisitions in promising areas
- Divest areas without sufficient growth potential
- Facilitate a cultural mindset change
- Identify future core competencies and hire employees with the right skill-set

Adverse actions

- Ignore the upcoming changes
- Focus on traditional OEMs as clients only and miss chance with new players
- Spread resources across too many growth areas
- Rely on current culture and skill-set only, since the right to play in automotive might change in future
- Consider starting margin declines as a temporary effect and not as indicator for the industry change
- Focus solely on non-automotive as future growth opportunity to avoid getting bogged down in unknown areas

Strategic mission statement

Offense is the best defense – Focus on cost-efficiency or proactive portfolio transition to future growth segments

Source: Roland Berger/Lazard

Technology system integrators will be facing new players as well as automotive OEMs defending their margin potentials

Top challenges for most technology system integrators

Electrification and digitization	> Changing car concepts and changing mobility behavior require product portfolio adaptions > Increasing importance of lightweight solutions to increase EV range > Car-as-a-service trend causes shift away from lucrative high-end variants as car becomes less of a status symbol but also opens up new opportunities
Autonomous driving	> As the competition for future core technologies is in full force, autonomous driving has the potential to re-shuffle the automotive value chain – however, there are large capex requirements, with uncertain payback
Breaking up of systems	> OEMs defend their margin potential and may manufacture future key technologies in-house, stepping away from complete system outsourcing
Increasing competition	> New players, e.g. for automated driving or BEV[1)], push into the market > Digital players have identified automotive as a future growth segment
Financing needs	> Traditional and new technologies require R&D investments in parallel > Pre-financing of manufacturing equipment for new technologies > Financing of M&A activities (market shares and/or new technologies)
Internal cultural change	> Software and electronics specialists become employee target group, bringing a different cultural mindset into the company > Organizations need to become more flexible and agile > Employees expect an innovation-friendly environment

Need for action

How to participate in future growth segments?

1) BEV – Battery electric vehicle

Source: Roland Berger/Lazard

The most promising strategy for technology system integrators is to defend their positioning by exploiting future technologies

Strategic direction of most technology system integrators

Favorable actions

- Active portfolio management, incl. divestments and aggressive exploitation of new technologies
- M&A activities to acquire new products, new skills and/or additional market shares
- Extend footprint into today's digital hubs to catch up with digital players
- Consider own venture capital investments
- Set up performance improvement actions
- Consider JVs or partnerships with complementary partners in areas with large capital requirements

Adverse actions

- Try to manage new opportunities solely on own efforts instead of involving new expertise
- Ignoring of new players (as clients or competitors)
- Focus on electrified and autonomous mobility only and miss other business opportunities
- Focus on traditional technologies only and fall behind on new technologies
- Further guarantees of employment, keeping employees with wrong skill-sets and thus worsen cost structures for the future

Strategic mission statement

Remain system-relevant – Make the company irreplaceable for OEMs and leverage positioning into new fields

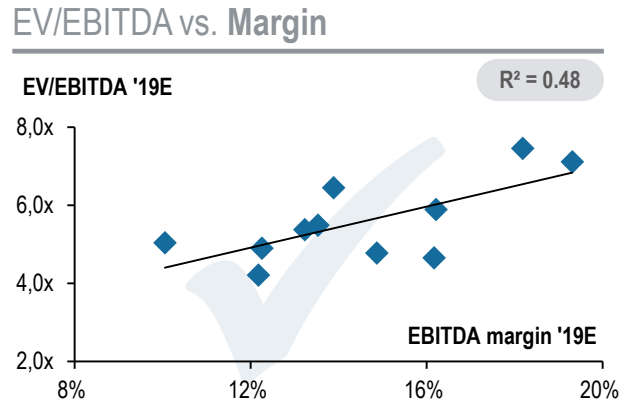
Source: Roland Berger/Lazard

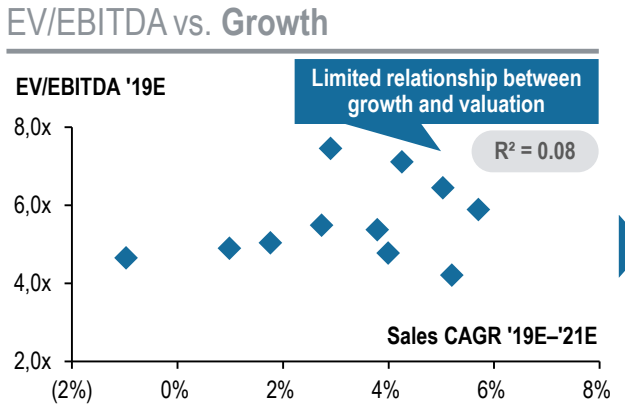
Especially diversified players and system integrators can benefit from the right portfolio mix combining attractive profit levels and growth potential

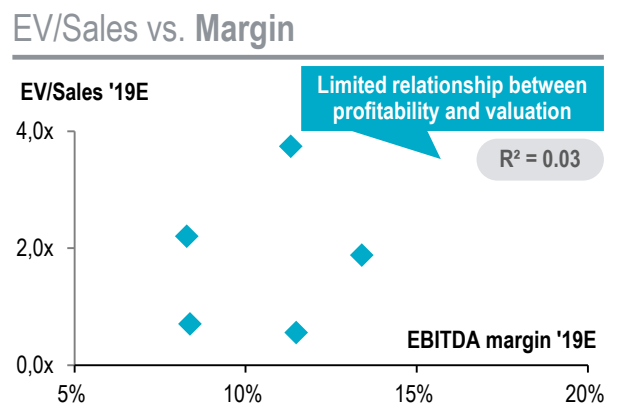
Analysis of valuation drivers

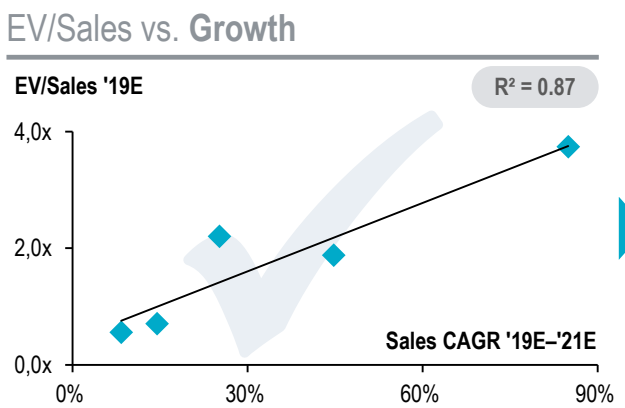
Traditional automotive supplier space[1)]

High-growth automotive space[2)]









In the traditional supplier domains, investors consider **operational excellence/ margin levels** more important than growth expectations

In the new high-growth areas, investors consider **growth expectations/ potential** more important than current margin levels

1) Illustrative peers: American Axle, Autoliv, BorgWarner, Brembo, Continental, Dana, Delphi, Hella, Magna, Norma and Valeo
2) Illustrative peers: Akasol, Aumann, Tesla, Visteon and Voltabox

Source: Bloomberg, Roland Berger/Lazard

Suppliers have to act now in order to remain successful in the future

Key takeaways for automotive suppliers

- **Suppliers should not ignore the current** technological and economic **changes** in the market
- **Performance programs are a must** for basically all established suppliers – For **small suppliers with commoditized portfolio** they are **vital**
- **Structural measures** will be essential for suppliers to cope with the **growing pressure on margins through 2025**
- **Suppliers with** a **broad** product **portfolio** are **best positioned for upcoming challenges**
- **Suppliers should accelerate consolidation/capacity adjustments** in the traditional domains and run those as "cash cows"
- **Expensive cash acquisitions** are **primarily recommended for larger**, financially strong **suppliers** – **Smaller/weaker suppliers should** actively **consider a disposal, merger or equity raise**
- **Suppliers should** proactively **ensure mid-term/long-term financial flexibility**
- **In new, high-growth areas** requiring massive R&D/upfront investments, established **suppliers should consider** adapting **VC investments or co-operations/JVs** to share the burden
- In the future, the right **employee skill-set becomes one of the most important assets**
- A universal **"one-size-fits-all" strategy does not exist – but it is time to act now**

Source: Roland Berger/Lazard

Contents

A

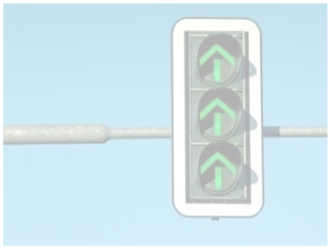
The status

Increasingly difficult environment after record profits until last year

B

The future

The transformation of the automotive industry is well underway



C

The strategies

Suppliers have different opportunities to prepare for the future

D

The contacts

Roland Berger and Lazard Automotive teams

Please contact us for further information

Authors of this study

Felix Mogge
Senior Partner

+49 89 9230-8346
felix.mogge@rolandberger.com

Thomas Schlick
Senior Partner

+49 69 29924-6202
thomas.schlick@rolandberger.com

Florian Daniel
Principal

+49 89 9230-8374
florian.daniel@rolandberger.com

Ken Oliver Fritz
Managing Director

+49 69 170073-69
ken.fritz@lazard.com

Christof Söndermann
Managing Director

+49 69 170073-221
christof.soendermann@lazard.com

Source: Roland Berger/Lazard

This presentation was prepared by Lazard & Co. GmbH ("Lazard") and Roland Berger GmbH ("RB") exclusively for the benefit and internal use of our clients and solely as a basis for discussion of certain topics related to the automotive supplier industry described herein. This presentation is strictly confidential and may not be reproduced, summarized or disclosed, in whole or in part, without the prior written authorization both of Lazard and RB, and by accepting this presentation you hereby agree to be bound by the restrictions contained herein.

This presentation is based on publicly available information that has not been independently verified by Lazard or RB. Any estimates and projections contained herein involve significant elements of subjective judgment and analysis, which may or may not be correct. Neither Lazard, nor any of its affiliates, nor any of its direct or indirect shareholders, nor any of its or their respective members, employees or agents, nor RB provides any guarantee or warranty (express or implied) or assumes any responsibility with respect to the authenticity, origin, validity, accuracy or completeness of the information and data contained herein or assumes any obligation for damages, losses or costs (including, without limitation, any direct or consequential losses) resulting from any errors or omissions in this presentation.

The economic estimates, projections and valuations contained in this presentation are necessarily based on current market conditions, which may change significantly over a short period of time. In addition, this presentation contains certain forward-looking statements regarding, among other things, the future financial performance of automotive suppliers, which may include projections based on growth strategies, business plans and trends in the automotive sector and global markets. These forward-looking statements are only predictions based on current expectations; the actual future results, levels of activity and/or financial performance of automotive suppliers may differ materially from the predictions contained in this presentation. Changes and events occurring after the date hereof may, therefore, affect the validity of the statements contained in this presentation, and neither Lazard nor RB assumes any obligation to update and/or revise this presentation or the information and data upon which it has been based.